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Mr. Flack (Des)
1941

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INDUSTRIAL-ORNAMENTAL

STANDARD
PERFORATED
METALS

Registers & Grilles
Industrial Screens

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STANDARD
STAMPING & PERFORATING CO.

CHICAGO ILLINOIS

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REGISTERS & GRILLES

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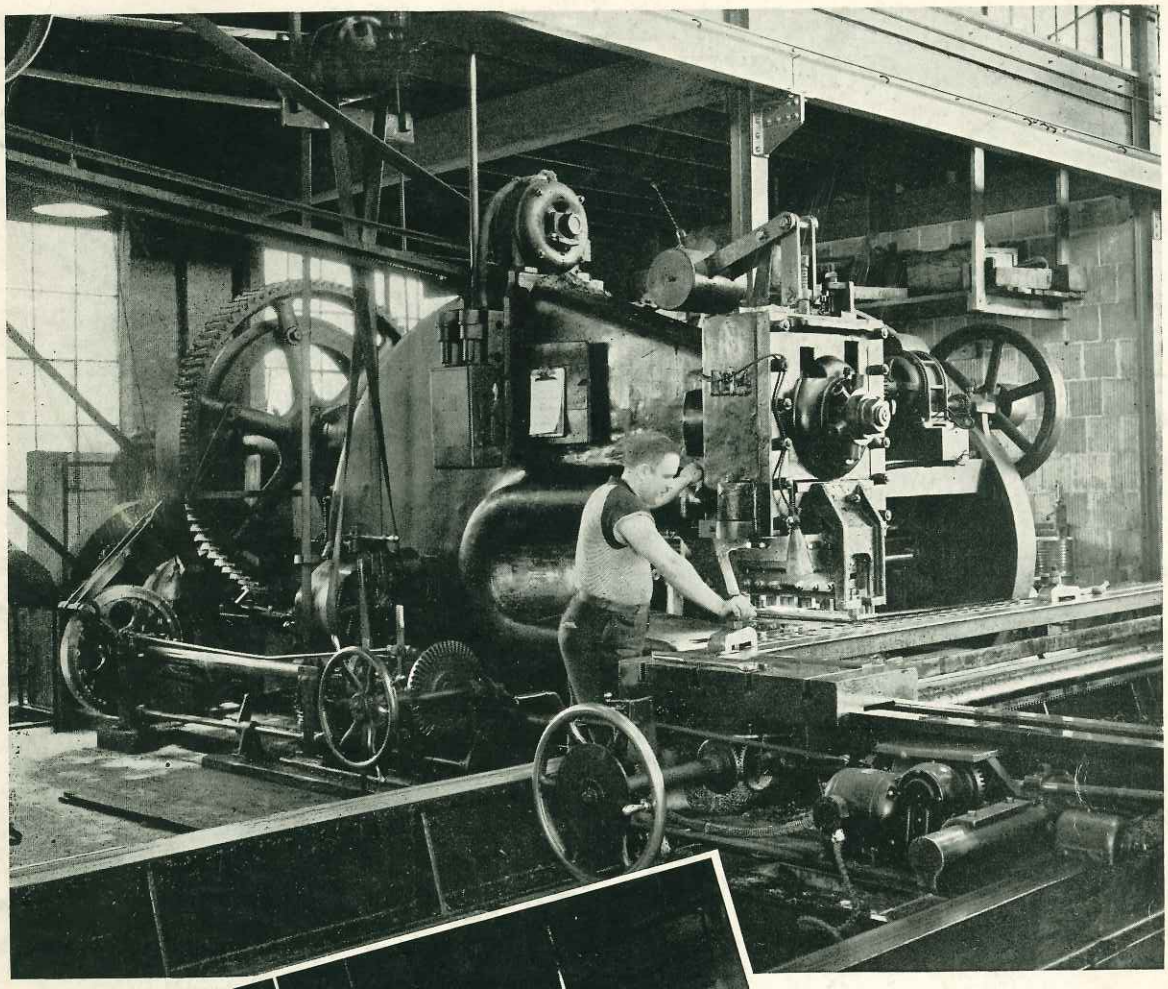
STANDARD STAMPING & PERFORATING CO.



500 TON RAILROAD PRESS . . . with automatic feed and cross feed, punching up to 1" thick and 6" round; 144" wide, any length.

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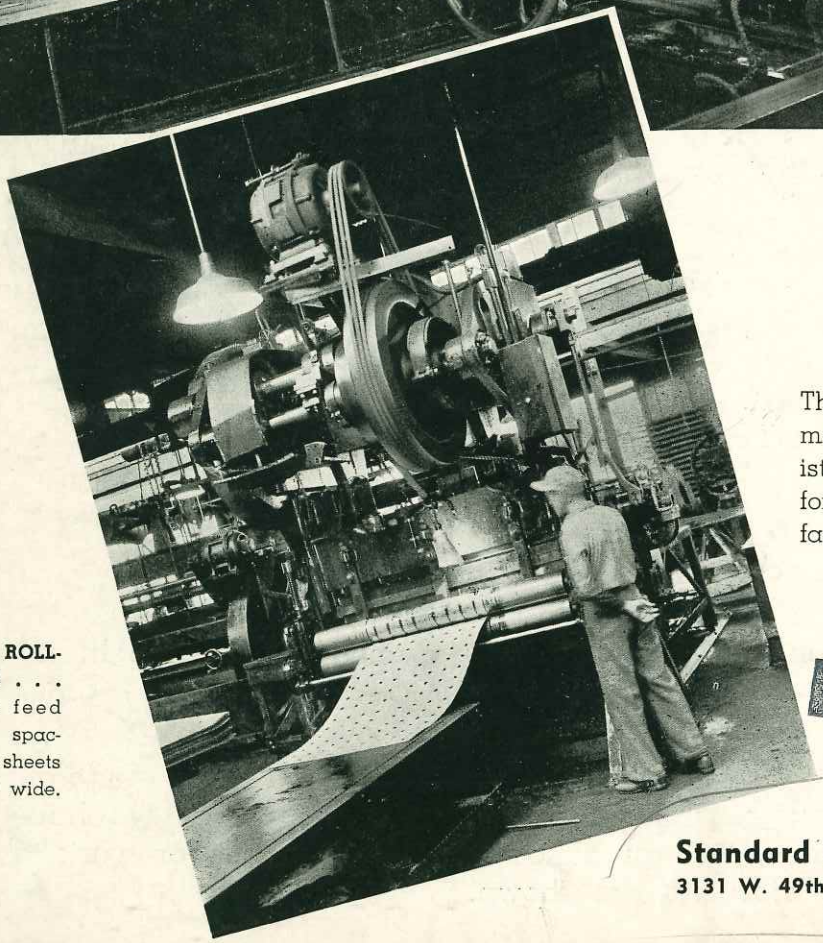

250 TON ROLLER PRESS . . . Automatic feed roller for spacing. Takes sheets up to 60" wide.

CATALOG 1941

This catalog is offered to aid you in meeting your requirements on registers and grilles; industrial screens for sifting and sorting; and light, fancy panels.

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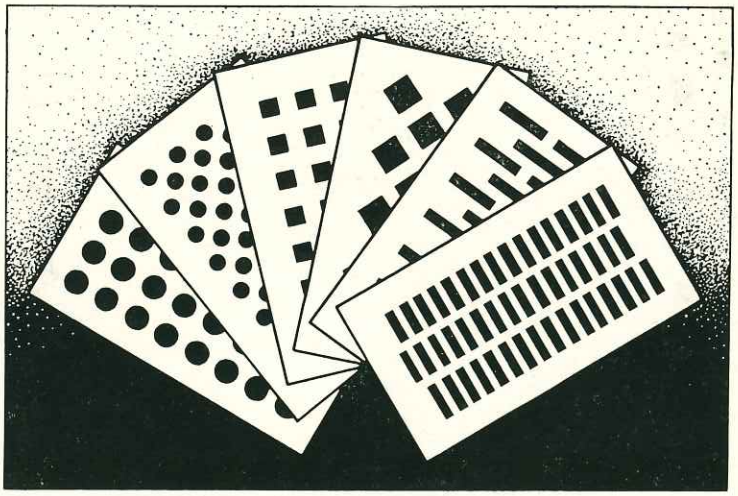
Standard Stamping & Perforating Co.
3131 W. 49th Place Chicago, Ill.
Telephone HEMlock 8406

ROUND, SQUARE and SLOT HOLES for INDUSTRIAL SCREENS

PERFORATED METAL



PERFORATED METAL

HOW TO ORDER

When ordering perforated metal for industrial use, it is necessary to show the following information

1. Number of pieces required.
2. Gauge of material.
3. Kind of material (steel, brass, copper, zinc, aluminum, etc.)
4. Size of sheet. (If irregular, send sketch)
5. Size and style of perforation.
6. Blank border, if any.

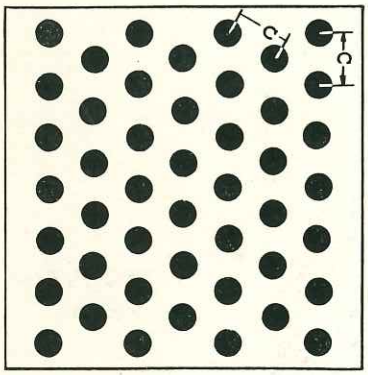
In the case of cylinders, we request the following information, IN ADDITION to items listed above, in order to correctly fill your order:

1. Diameter of cylinder (I.D. or O.D.)
2. Length of cylinder.
3. Number of pieces to circumference.
4. Number of pieces to length.
5. Type of assembly; — bolt holes, plain or countersunk; clips and bolts; or butt straps.

In the case of truncated cones (conical sections), specify whether height is vertical height or slant height.

• In the event that you do not find listed the particular type of perforation best suited to your needs, we suggest that you correspond with us, as we have many special dies not listed. Then, too, an almost limitless number or variations are possible with the standard dies that are shown.

ROUND HOLES



STAGGERED CENTERS

Method of Measuring Centers

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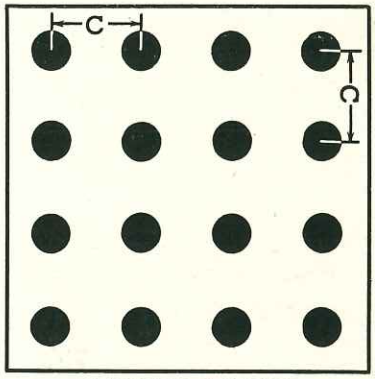
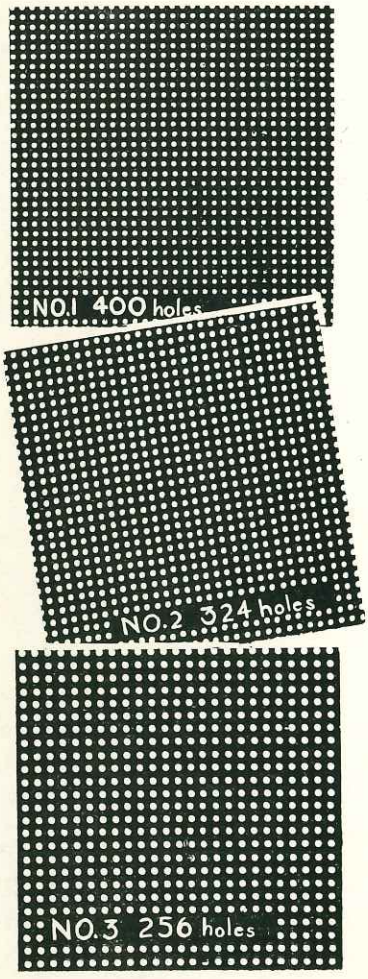


STRAIGHT CENTERS



SIZE Perforation	STAGGERED CENTERS			STRAIGHT CENTERS			Max. Gauge
	Centers	Holes per sq. in.	Per cent Open Area	Centers	Holes per sq. in.	Per cent Open Area	
1/32″	1/16″	295	22½	9/64″	51	4	22
1 mm.	1/16″	295	37				22
	9/64″	59	7¼	9/64″	51	5¾	
3/64″	3/32″	131	22½				20
	5/32″	47	8¼	5/32″	41	6½	
1/16″	7/64″	96	29½				16
	3/16″	33	11	3/16″	29	8¾	
	1/8″	74	22½				
	7/32″	24	7½	7/32″	21	6	
1/14″	7/64″	96	38½				16
	3/16″	33	13	3/16″	29	10¼	
.081″	9/64″	59	30				14
	1/4″	18	9½	1/4″	16	7½	
.085″	5/32″	47	27				14
	9/32″	15	8½	9/32″	13	6¾	
3/32″	5/32″	47	32½				14
	9/32″	15	10	9/32″	13	8	
	3/16″	33	22½				
	5/16″	12	8	5/16″	10¼	6¼	
7/64″	3/16″	33	30¾				14
	5/16″	12	11	5/16″	10¼	8¾	
	7/32″	24	22½	5/32″	41	39½	
1/8″	3/16″	33	40¼				12
	5/16″	12	14½	5/16″	10¼	11½	
	1/4″	18	22½				
	7/16″	6	7½	7/16″	5¼	6	
9/64″	1/4″	18	17¼				12
	7/16″	6	6	7/16″	5¼	4¾	

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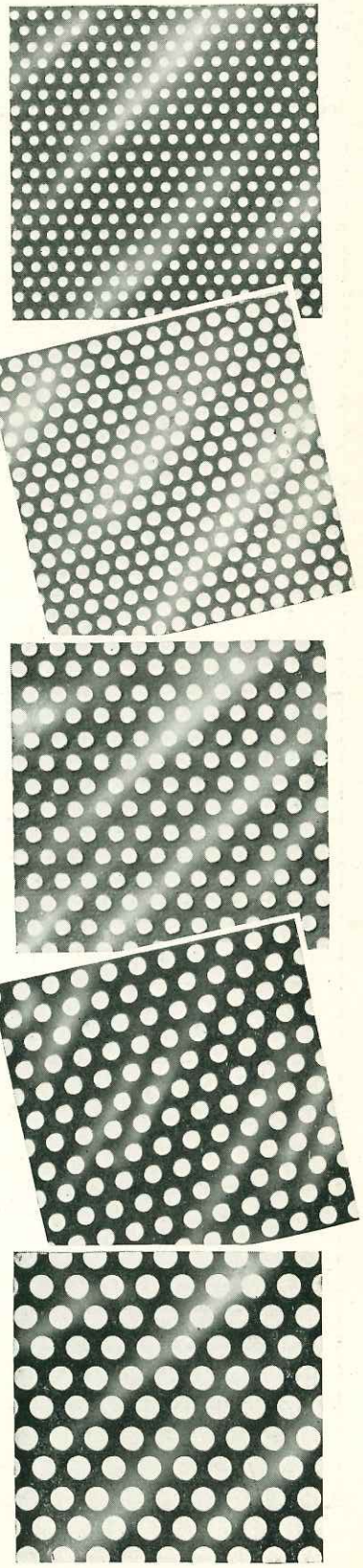
ROUND HOLES (Continued)

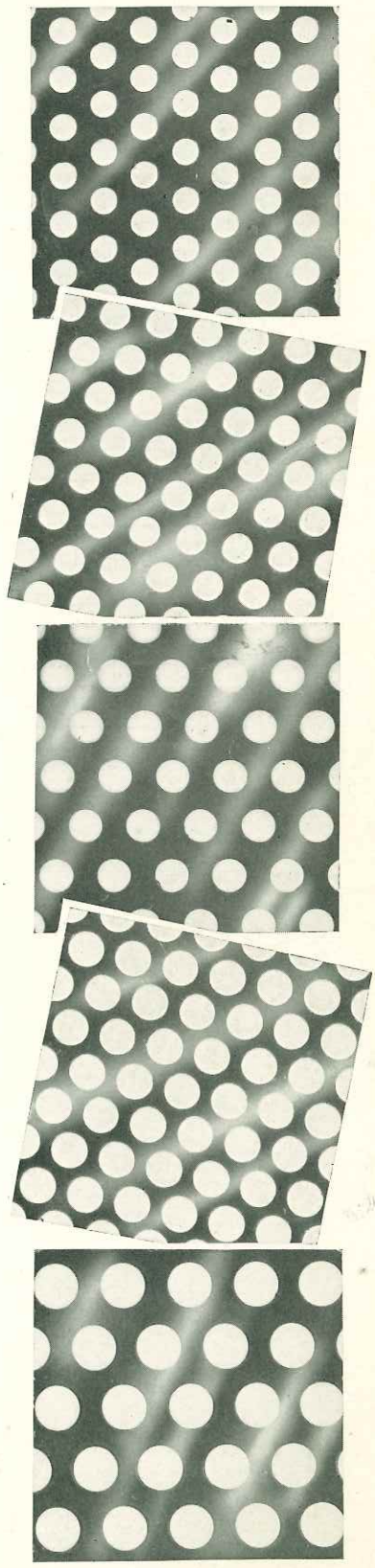
Size of Perforations	STAGGERED CENTERS			STRAIGHT CENTERS			Max. Gauge
	Centers	Holes per sq. in.	Per cent Open Area	Centers	Holes per sq. in.	Per cent Open Area	
5/32″	7/32″	24	46				10
	3/8″	8.2	15¼	3/8″	7.1	12	
	1/4″	18	34½				
	7/16″	6	11½	7/16″	5.25	9	
	9/32″	15	28¾				
	15/32″	5.3	9½	15/32″	4.5	7½	
3/16″	1/4″	18.5	51				3/16″
	7/16″	6	16½	7/16″	5.2	14½	
	5/16″	10.8	32½				
	9/16″	3.7	10	9/16″	3.2	8¾	
7/32″	5/16″	10.8	44½				10
	9/16″	3.7	13¾	9/16″	3.2	12	
15/64″	11/32″	9.8	46¼	19/32″	2.8	12¼	20
1/4″	11/32″	9.8	48	19/32″	2.8	14	1/4″
	1/2″	4.6	22½	55/64″	1.4	6½	
	3/8″	8.2	40				
	5/8″	3	15½				
9/32″	13/32″	7	43				10
	45/64″	2.3	14½	45/64″	2	12¼	
5/16″	7/16″	6	46¼				5/16″
	3/4″	2.1	16	3/4″	1.8	14	
	1/2″	4.6	35				
	55/64″	1.6	12	55/64″	1.4	10½	
				1 19/64″	.59	4½	
11/32″	15/32″	5.3	48½	21/64″	1.6	14½	10
3/8″	1/2″	4.6	51	1/2″	4	44½	3/8″
	3/4″	2.1	22½	55/64″	1.4	15½	
	9/16″	3.7	40				
	31/32″	1.2	13½	31/32″	1.1	11¾	
				1 19/64″	.59	6¼	
13/32″	17/32″	4.1	53	59/64″	1.2	15½	10
7/16″	5/8″	3	44¼	1 1/16″	.89	13	3/8″



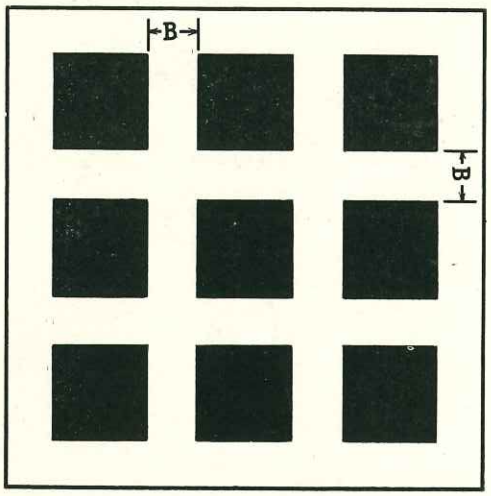
ROUND HOLES (Continued)

Size of Perforations	STAGGERED CENTERS			STRAIGHT CENTERS			Max. Gauge
	Centers	Holes per sq. ft.	Per cent Open Area	Centers	Holes per sq. ft.	Per cent Open Area	
1/2"	11/16"	351	47½	1 3/16"	103	14.	½"
	¾"	296	40	1 5/16"	84	11¾	
	1"	166	22½	1 43/64"	48	6½	
	1 3/16"	118	16				
9/16"	¾"	296	51	¾"	257	44½	½"
				1 5/16"	84	15	
5/8"	⅞"	217	47	1½"	64	13¾	⅝"
3/4"	1"	166	51	1 23/32"	47	15	¾"
7/8"	2"	42	27¾	2"	37	24¼	
15/16"	1⅛"	131	62½				
1"	1⅛"	131	71	2⅛"	32	16½	
	1¼"	106	58	2⅜"	26	13¾	
	1⅜"	88	47½	2 13/32"	23	11½	
	1½"	74	40				
1-1/16"	1½"	74	45	2 17/32"	23	13	
1-1/8"	1½"	74	51	2 17/32"	23	14¾	
1-3/16"	1⅝"	63	48¼	2 13/16"	19	14	
1-1/4"	1⅝"	63	53½	2 13/16"	19	15½	
	1⅞"	47	40	3 7/32"	14	11½	
1-5/16"	2"	42	39	3 15/32"	12	11¼	
1-3/8"	1⅞"	47	48¾	3 7/32"	14	14¼	
1-1/2"	1¾"	54	66½	3"	16	19¼	
	2"	42	51	3½"	12	14¾	
1-9/16"	2 3/16"	35	46	3 13/16"	10	13¼	
1-5/8"	2⅛"	37	53	3¾"	10	15¼	
1-11/16"	2⅛"	37	57	3¾"	10	16½	
1-3/4"	2¼"	33	54¾	3 29/32"	9½	15¾	
	2⅜"	30	49	4 3/16"	8¼	14¼	
2"	2½"	27	58	4 5/16"	7¾	16¾	
2-1/8"	2⅞"	20	49½	5 3/16"	5¼	14¼	
2-1/4"	2⅞"	20	55½	5 3/16"	5¼	16	

The following size perforations can be supplied in any centers: 2⅜, 2½, 2 9/16, 2⅝, 2¾, 2⅞, 3, 3¼, 3⅜, 3¾, 4, 4½, 4¾, 5, 5¼, 6 inches.

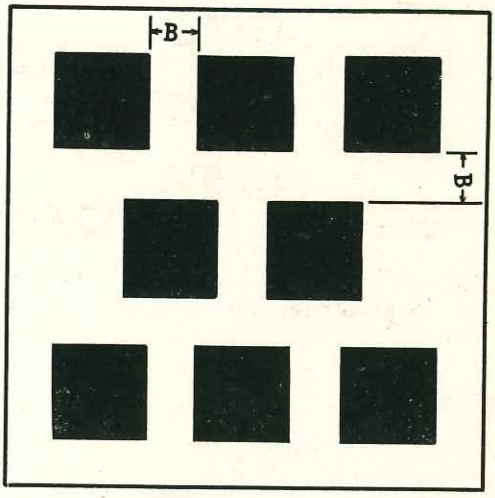


SQUARE HOLES



SQUARE HOLES ON STRAIGHT CENTERS

Method of Measuring Bridges

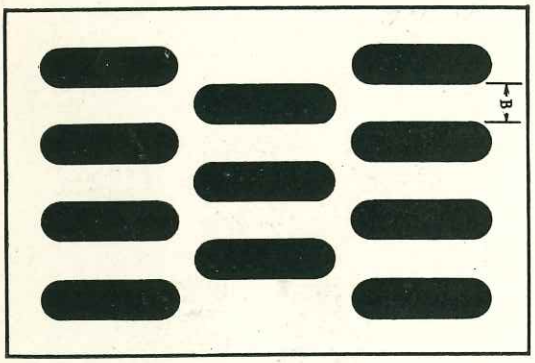


SQUARE HOLES ON STAGGERED CENTERS

All square holes can be furnished on either staggered or straight centers; bridge, number of holes per square foot, and open area are the same in either style.

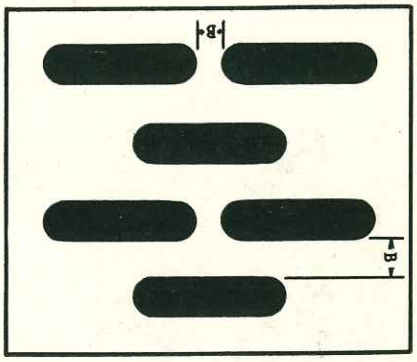
Size Hole	Bridge	Holes Per Sq. Ft.	Per Cent Open Area
3/16"	1/8"	1475	36
1/4"	3/16"	752	33
5/16"	3/16"	576	39
11/32"	5/32"	576	47
3/8"	1/4"	484	36
7/16"	1/4"	305	41
1/2"	3/16"	305	53
1/2"	1/4"	256	44
5/8"	1/4"	188	51
3/4"	1/4"	144	56
13/16"	3/16"	144	66
7/8"	1/4"	114	61
7/8"	3/8"	92	49
1"	1/4"	92	64
1 1/8"	7/16"	59	52
1 1/4"	5/16"	59	64
1 1/2"	3/8"	41	64
2"	3/4"	19	53
2 1/4"	Any Size Bridge		
2 1/2"	Any Size Bridge		
3"	Any Size Bridge		

SLOT HOLES



HIT AND MISS ENDWAYS

Method of Measuring Bars



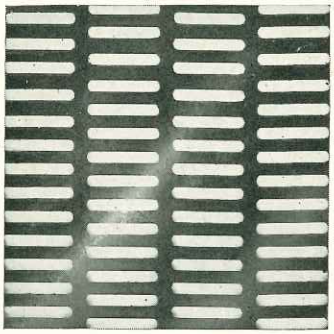
HIT AND MISS SIDEWAYS

- Slot holes can be furnished in either of two ways, HIT and MISS ENDWAYS or HIT and MISS SIDEWAYS. These are usually designated as H.M.E. and H.M.S. as shown above.

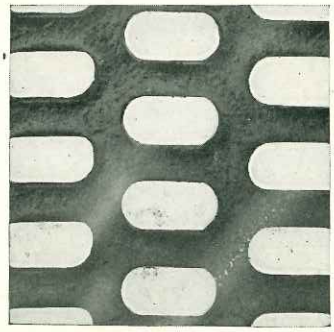
IT IS IMPORTANT when ordering slot holes to specify to which side of the sheet the slot is parallel.

H.M.E.

Size Slot	Bar "B"
1/16" x 3/8"	1/16"
1/14" x 1/2"	1/14"
5/64" x 1"	5/64"
7/64" x 3/4"	7/64"
1/8" x 3/4"	1/8"
1/8" x 1"	1/8"
5/32" x 1 1/2"	5/32"
3/16" x 1/2"	3/16"
3/16" x 3/4"	1/8"
3/16" x 3/4"	3/16"
1/4" x 1/2"	3/16"



1/16"x3/8" slot—H.M.E.



1/4"x1/2" slot—H.M.E.

H.M.E.

Size Slot	Bar "B"
1/4" x 1"	1/4"
3/8" x 1/2"	3/16"
3/8" x 3/4"	1/4"
3/8" x 1 1/4"	5/16"
3/8" x 1 1/2"	3/8"
7/16" x 3/4"	3/16"
7/16" x 15/16"	3/16"
1/2" x 3/4"	3/16"
1/2" x 3/4"	1/4"
1/2" x 1"	1/4"
3/4" x 1 1/2"	7/16"

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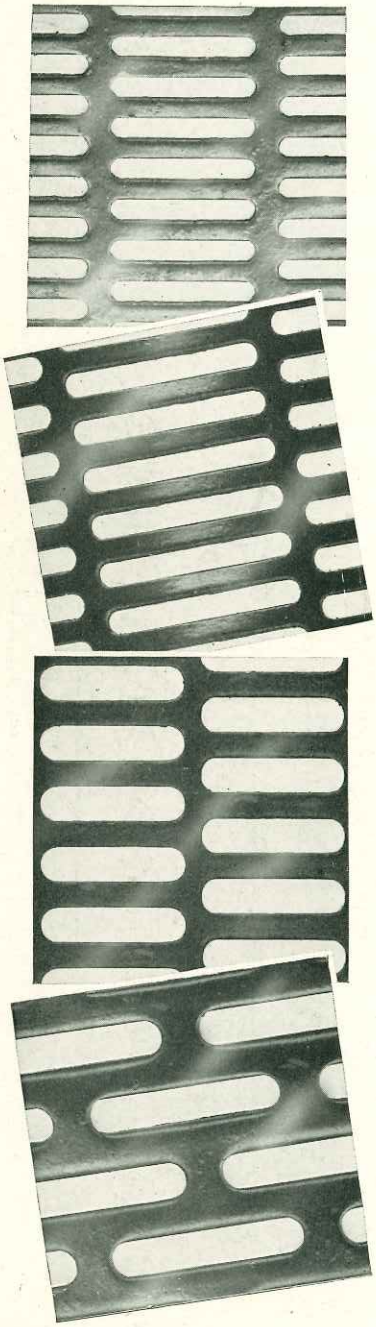
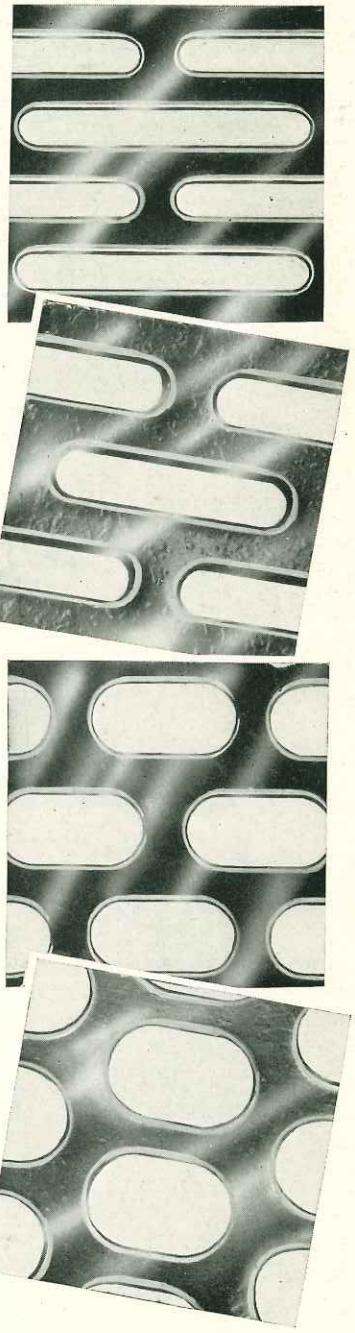
SLOT HOLES (Continued)



H.M.S.

Size Slot	Bar "B"	Size Slot	Bar "B"
1/16" x 1/2"	1/16"	1/4" x 1"	1/4"
5/64" x 35/64"	5/32"	9/32" x 1 1/4"	1/4"
3/32" x 1/2"	1/8"	5/16" x 5/8"	1/4"
3/32" x 1/2"	3/16"	5/16" x 1"	1/4"
1/8" x 1/2"	1/8"	3/8" x 1"	3/8"
1/8" x 3/4"	1/8"	3/8" x 1 1/4"	3/8"
1/8" x 1"	1/8"	3/8" x 1 1/2"	3/8"
1/8" x 1"	3/16"	3/8" x 1 3/4"	3/8"
3/16" x 3/4"	5/32"	3/8" x 2 1/2"	3/8"
3/16" x 3/4"	3/16"	1/2" x 1"	1/2"
3/16" x 1"	3/16"	1/2" x 1 1/2"	1/2"
3/16" x 1 1/2"	3/16"	5/8" x 1 3/4"	1/2"
3/16" x 2"	3/16"	3/4" x 2"	3/8"
1/4" x 3/4"	1/4"	1" x 2"	3/8"

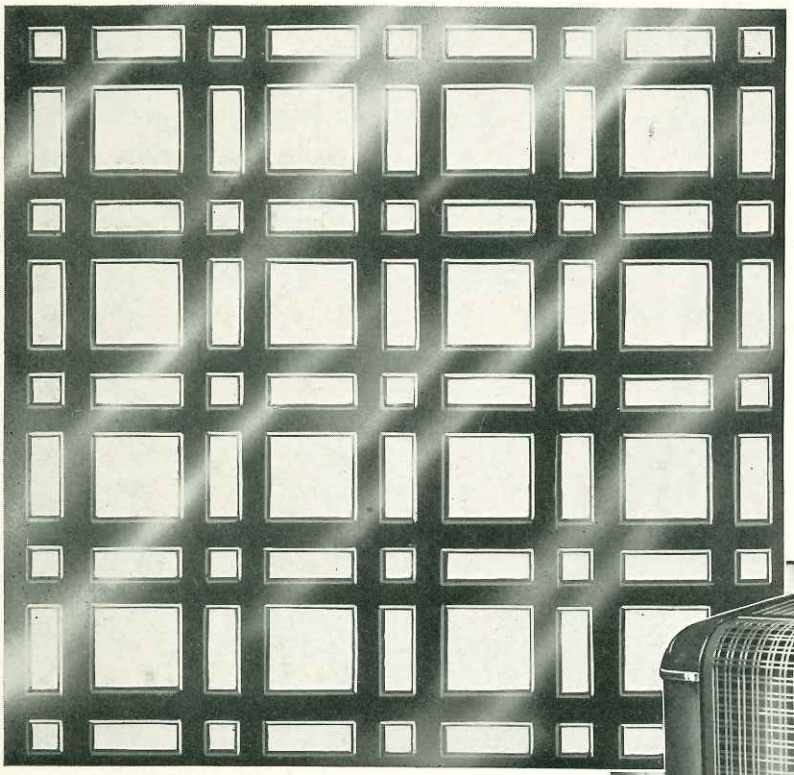


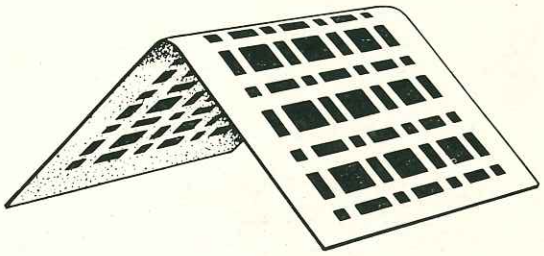
Also many special slots such as:

5/64 x 1 3/8; 11/64 x 3/4; 15/64 x 3/4; 17/64 x 3/4; 3/8 x 5/8; 7/16 x 1 31/32; 3/4 x 2 1/4; 1 x 3 1/2; 1 x 5; 1 x 8 3/4; 1 1/4 x 3 1/2; 1 1/4 x 6; 1 1/2 x 3; 1 1/2 x 3 1/2; 2 1/2 x 4 1/2; 2 1/2 x 6.

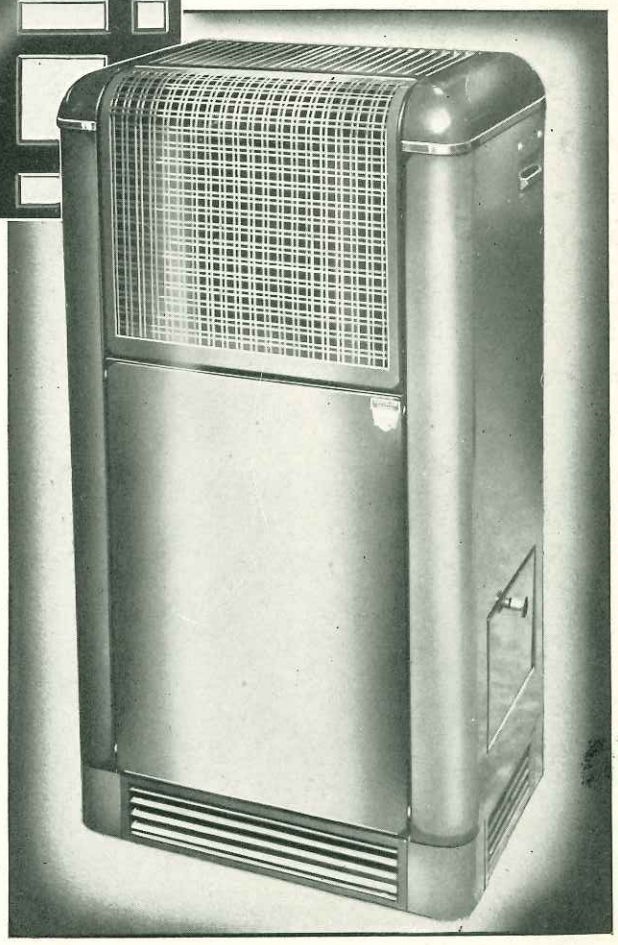
Not all slots available are listed here.

FANCY PANELS





"Bends like a sheet."



SQUAREFEX . . .

For strength and open area.

54% FREE AREA

SQUAREFEX is especially adapted for use in oil burners and similar applications where a panel is needed to withstand the strain of bending.

Carried in stock in sheets 36"x120" in #20 and #22 gauge enameling steel.
Can be made to order in smaller panels with any blank border desired.
We can furnish any type of material specified, gauge not to exceed #20 USS.
If you specify the finish required we will furnish the material best suited for that particular application.

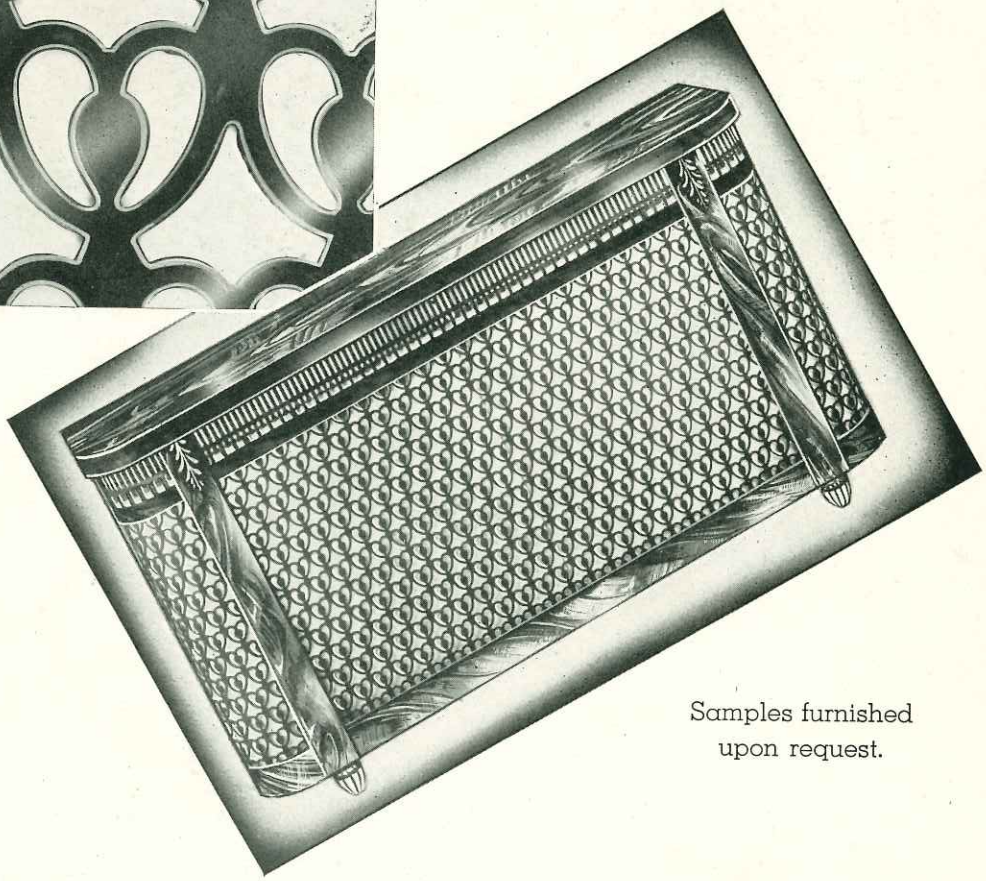
FANCY PANELS (Continued)

HEART DESIGN . . .

for use in fine cabinets, as shown below.

Used also for wood cabinets.

45% FREE AREA



Especially suitable for radiator covers or cabinets in which an ornamental design is required. This attractive, smooth-flowing pattern will enrich your product with its appealing appearance.

Samples furnished upon request.

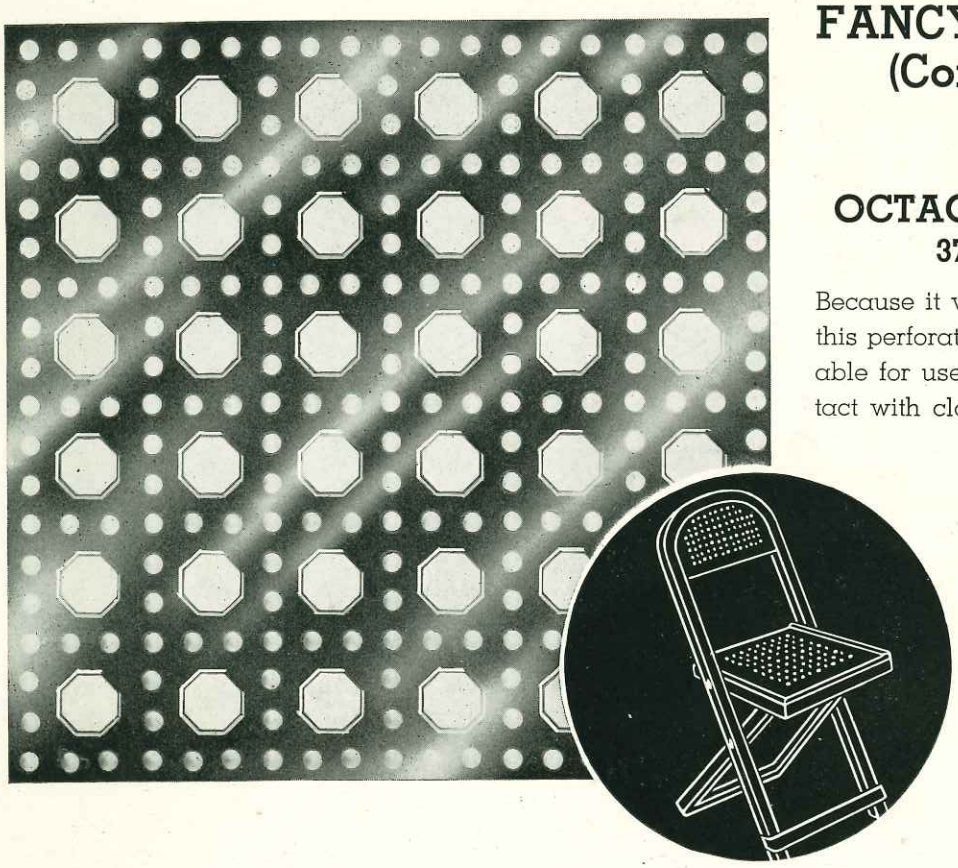
Carried in stock in sheets 36" x 120" in #20 and #22 gauge enameling steel.

Can be made to order in smaller panels with any blank border desired.

We can furnish any type of material specified, gauge not to exceed #20 U.S.S.

If you specify the finish required we will furnish the material best suited for that particular application.

FANCY PANELS
(Continued)



OCTAGON HOLE CANE
37% FREE AREA

Because it will not snag or catch buttons, this perforated design is especially adaptable for use in items which come in contact with clothing.

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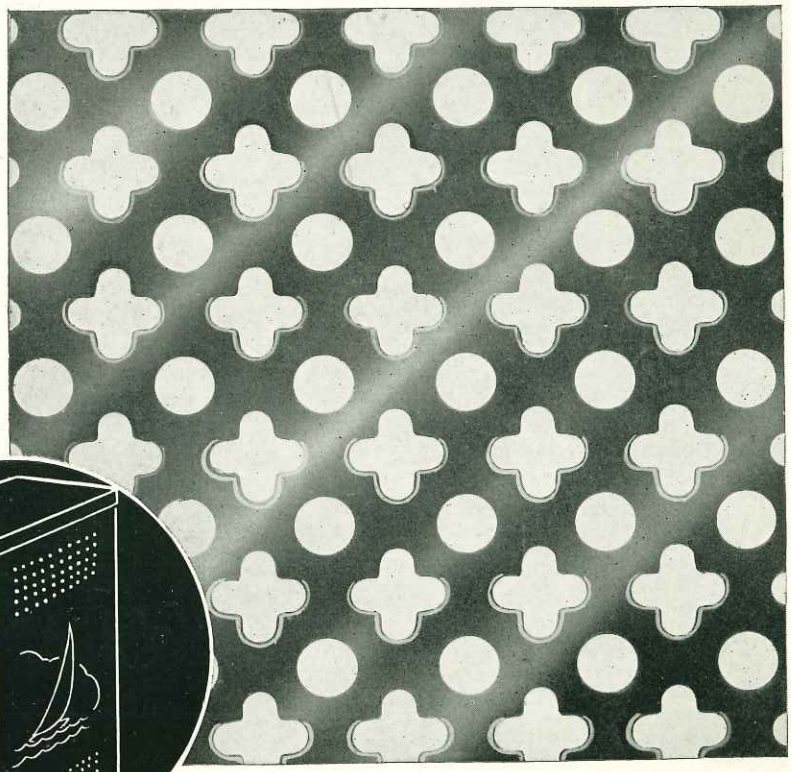
CLOVERLEAF and ROUND
40% FREE AREA

This variation in small perforations with its well rounded holes is used the same as Octagon Cane.

Both Octagon Hole Cane, and Cloverleaf and Round offer unlimited commercial opportunities.

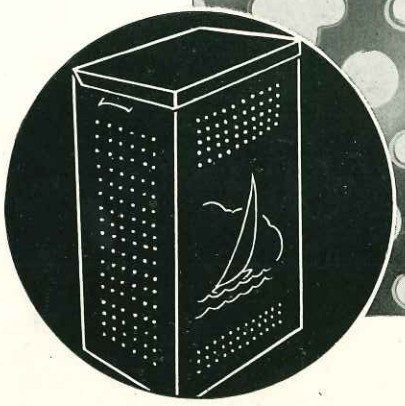


Carried in stock in sheets of 36" x 120" in #20 and #22 gauge enameling steel.

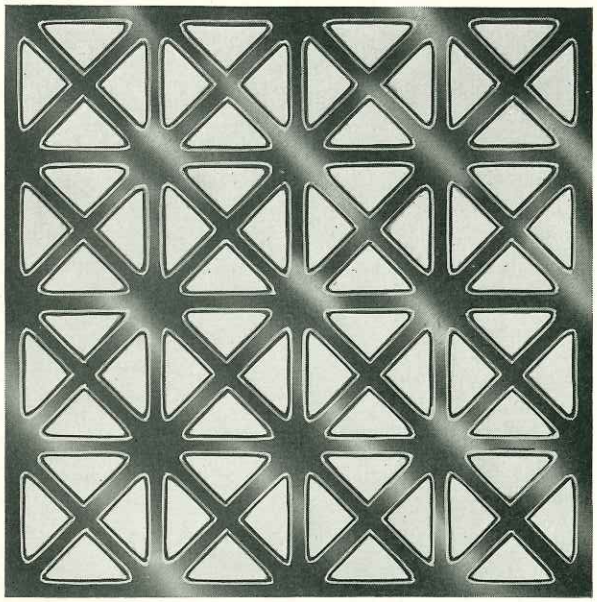
Can be made to order in smaller panels with any blank border desired.

We can furnish any type of material specified, gauge not to exceed #20 U.S.S.

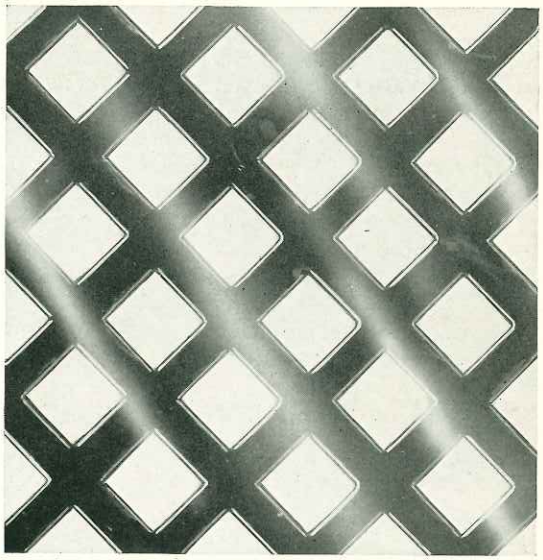
If you specify the finish required we will furnish the material best suited for that particular application.



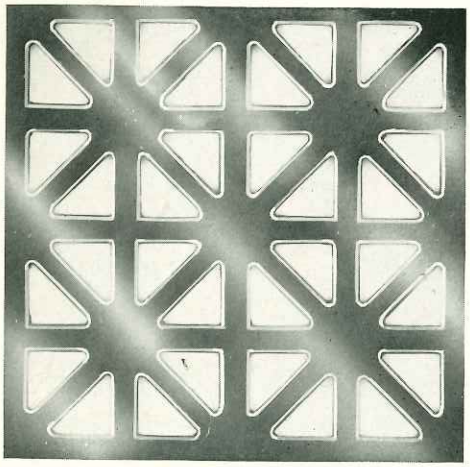
FANCY PANELS (Continued)



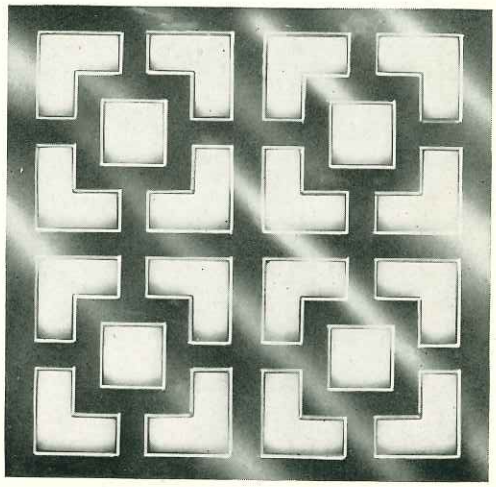
GRECIAN DESIGN
42% FREE AREA



⅜" DIAGONAL MESH
42% FREE AREA



UNION JACK
39% FREE AREA



SQUARE LINK
41% FREE AREA

Carried in stock in sheets 36"x120" in #20 and #22 gauge enameling steel. Can be made to order in smaller panels with any blank border desired. We can furnish any type of material specified, gauge not to exceed #20 USS. If you specify the finish required we will furnish the material best suited for that particular application.

REGISTERS and GRILLES

NOV 17 1948
DESIGN DIVISION

DEFINITIONS and SPECIFICATIONS*

DEFINITIONS

A Register: Is a metal device for volume and directional control of warm or cold air, located at the outlet of a duct and consisting of a face of open design attached to movable valve, loures, or shutters. The term register includes both the register face and register bottom, or Valve.

A Register Face: Is a metal plate of open design, having in its fretwork an opening for the operating handle of the louvres, and screw holes for attaching to the register bottom.

Register Bottom: The movable valve or valves, body frame and operating movement assembled for attaching to the register face.

Grille: Is a metal plate of open design similar to a register face except that wheel slot and screw holes in fretwork are omitted.

Floor Borders: Floor border an outer frame set into the floor into which a register or register face sets flush. Seldom used but designed originally for fire protection.

Bronze Metal: "Solid Bronze Metal Registers" is the trade name for Registers which have Faces of Cast Bronze, but bottoms or Louvres of Cast Iron or Stamped Steel, and our quotations are based on that interpretation.

If the entire register is to be made of Bronze Metal the specifications should also state "Bottoms to be of Bronze Metal throughout" and state whether Cast Bronze or Sheet Bronze is required.

For floor use we recommend Cast Bronze or at least $\frac{3}{16}$" thick Stamped Bronze Faces with Cast Iron or Cast Bronze Bottoms.

Stamped Bronze faces of light gauge are suitable for wall use and should be specified with Steel or sheet Bronze Bottoms.

SPECIFICATIONS

First: Specify that all Grilles and Registers shall be Standard Stamping and Perforating Co., Chicago, Ill.

Second: State whether Register or Grille is required. (See Definitions).

Third: State material — Cast — (Iron, Brass, Bronze, Aluminum). STAMPED — State Gauge (Steel, Brass, Bronze, Aluminum or Monel Metal). FABRIKATED (steel).

Fourth: State Design; use our numbers for Cast, Stamped or Fabrikated designs; or "Made to Architect's special details".

Fifth: State size (unless otherwise specified we will assume the dimension is the duct or opening size). On Stamped Grilles we will also assume that an additional margin of approximately one inch all around will be acceptable. If exact extreme size is required, it should be so stated. On Cast Grilles the opening size and extreme size should both be given.

Sixth: State location, whether floor, ceiling or wall. We recommend Cast, Heavy Steel or "Fabrikated" for floor.

Seventh: State finish; see list of standard finishes shown below.

Eighth: State method of fastening.

Ninth: State Hinging if required.
Specify: (a) Which side bears hinges.
(b) Whether attached to marble, stone or iron work.

Tenth: State drilling if required. NOTE rims will **not** be drilled unless so ordered.

STANDARD FINISHES

The following finishes are standard and should be specified by name.
Any special color should be accompanied by sample for matching.

JAPAN AND SPECIAL LACQUERS

Mill Finish or Unfinished
Prime Coat
Black Japan
White Japan

Dull Black
Silver
Bronze
Antique

Dull Brass
Oxid. Copper
Bauer Barff
Ivory

Oak
Walnut
Mahogany
Verde Antique

ELECTROPLATED

When "Bronze Plated" only is specified, Medium Statuary Bronze color is furnished.

Statuary Bronze (Light, Medium or Dark)
Bright Polished Bronze
Copper (Dull or Bright Polished)
Nickel (Dull or Bright Polished)

Bright Polished Brass
Dull Brass (Brushed Finish)
Sand Blast Brass
Oxidized Copper (Spotted Copper)

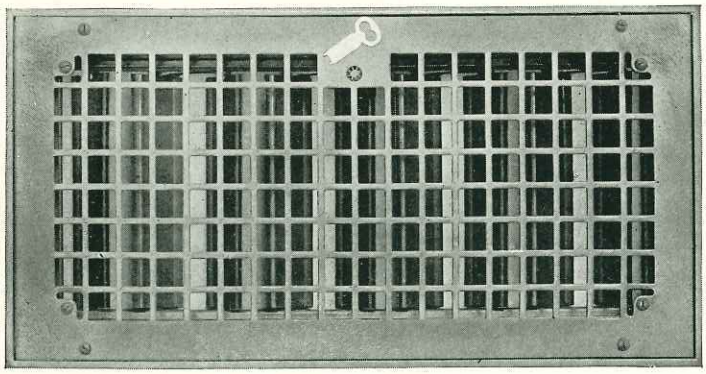
Chromium (Bright or Satin)
Cadmium
Dead Black (Imitation Bauer Barff)

* Used by permission of Register & Grille Mfg. Co.

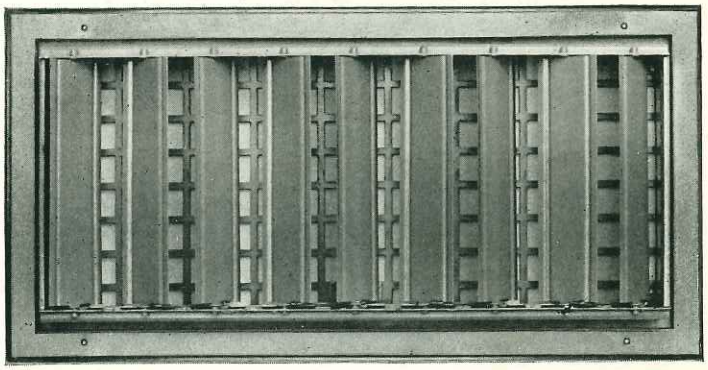
ARROWTROL REGISTER

TRADE MARK

PERFECT VOLUME CONTROL - - - ALWAYS STRAIGHT FLOW



Style 3370 "Arrowtrol" with 13-W Frame (13-W Frame may be omitted).
(Key-lock "Arrowtrol" Shutter with Plain Lattice Design Face set in 13-W Plaster Frame.)

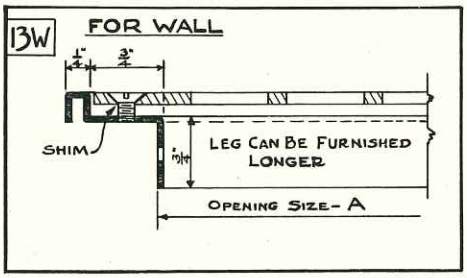


Rear view. Note adjacent Blades rotate in reverse circular direction forming a series of Vees always insuring **straight** outward flow of air.

Any Style Face may be used but we suggest the Plain Lattice Design or the straight throw Fabrikated Face (No. 3311 or No. 3321). Either of these will insure the straightness of the air flow.

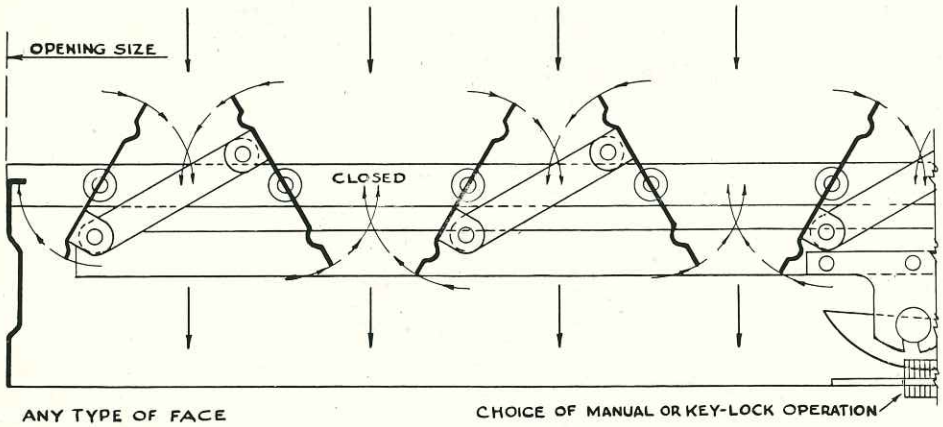
Shutters are equipped with brass bearing sleeves and positive cam leverage.

The locking feature is a brass pinion gear operating on a steel geared wheel segment.



Cut shows the 13-W Plaster Flush Frame for Wall use. If used in connection with the "Arrowtrol" Register it provides an easy and economical installation.

ARROWTROL SHUTTER
TRADE MARK



Operation of shutters may be lock type, wheel type, or knob control. Depth of shutters, 2½" closed, 3⅛" open.

STRAIGHT FLOW AT EVERY GRADUATION OF VOLUME

HOW TO SPECIFY

By Description

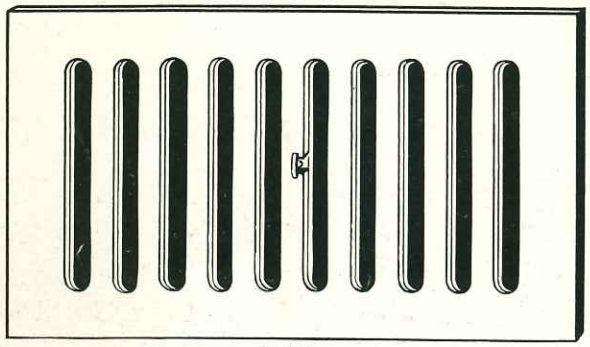
Key Lock, (or knob or wheel) Volume Control Shutters with adjacent blades rotating in reverse circular direction, graduating from closed position to full open, and presenting the air stream to the face in positive straight flow at every graduation.

By Name

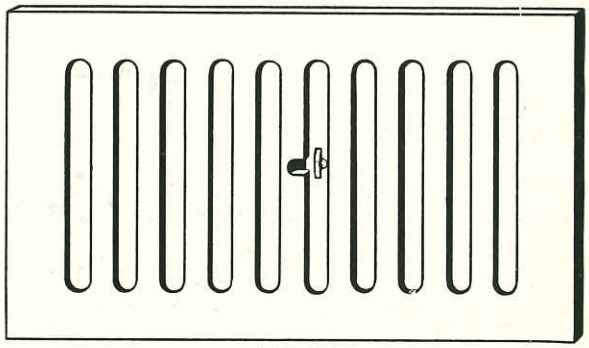
Specify Register Face number and Key Lock, (or knob or wheel) "Arrowtrol" Shutters as furnished by Standard Stamping and Perforating Company of Chicago.

* Used by permission of Register & Grille Mfg. Co.

SLIDING DAMPERS



OPEN



SHUT

May be installed inside duct to adjust system to greater or lesser air capacity.

Made of two #14 gauge perforated panels to permit adjustment of air. One of the perforated panels is stationary and the second plate, which has a knob attached, is made to slide in back of the stationary plate.

The maximum size that can be furnished, using one movable plate, is 36"x12". Maximum size, furnishing stationary plate in one piece and using two or more movable plates, is 48"x36".

Unit can be fastened by means of clips, or by having a ¾" turned-back flange on short dimensions.

Standard size slot opening used is ¾"x5¾".

Can be furnished in steel, bronze, or aluminum.

Sliding dampers are not carried in stock.

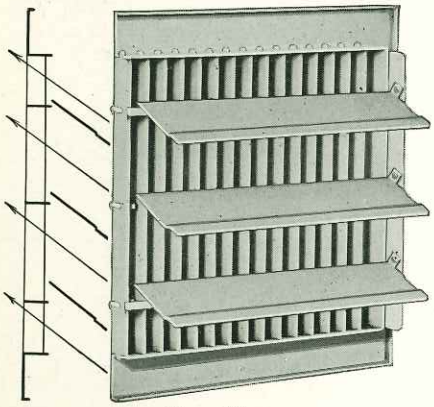
Detail drawing will be furnished on request.

AIR CONDITIONING — "Fabrikated" Wall Grilles

with Deflecting Vanes TO GIVE FOUR-WAY DEFLECTION TO AIR FLOWS

With these grilles, compound deflections of air flows can be achieved with accuracy and certainty. The directional adjustment can be made at the time of installing; or after the grille is in position, the grille bars and vanes may easily be adjusted to make corrections necessary to meet unforeseen or changed conditions.

Each grille bar, likewise each deflecting vane in the back of the grille, is adjusted INDIVIDUALLY with a special two-prong tool which accompanies each shipment. Grille bars and deflecting vanes do not require locking. They are held firmly in place and will not vibrate nor rattle.

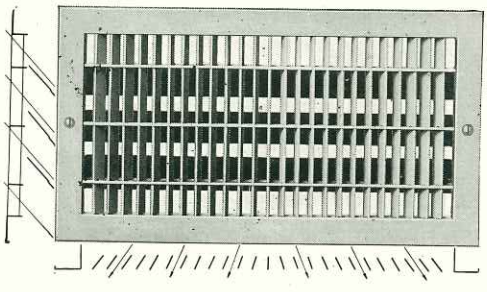


Rear View

Showing Horizontal Adjustable Deflecting Vanes.

Style H.M.V. Deflecting Vanes.

Deflecting Vanes 1½" wide. Spacing of Vanes 1⅜".



STYLE No. 3320 GRILLE

Deflecting Horizontal Vanes direct air flows up or down.

Vertical Adjustable Grille Bars direct air flows right or left.

No. 3320 Grille with H.M.V. Deflecting Vanes. With vertical grille bars and horizontal deflecting vanes. The grille bars may be individually adjusted to direct air flows to right or left; and the vanes are made individually adjustable to deflect air flows up or down.

This same result can be obtained with the style **No. 3310 Grille** and the **V. M. V. Deflecting Vanes.** With this combination the grille bars may be adjusted to direct the air flow up or down, while the V.M.V. deflecting vanes throw the air right or left. Excellent for cooling installations.

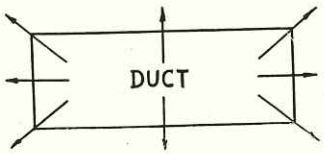
PATENT OFFICE
NOV 17 1948
DESIGN DIVISION

The Latest Development for AIR CONDIDTIONING INSTALLATION

is the

Unlimited Volume Control * ARC ENG ARCHITECT ENGINEER TRADE MARK **REGISTER**

ALL WAY DEFLECTION

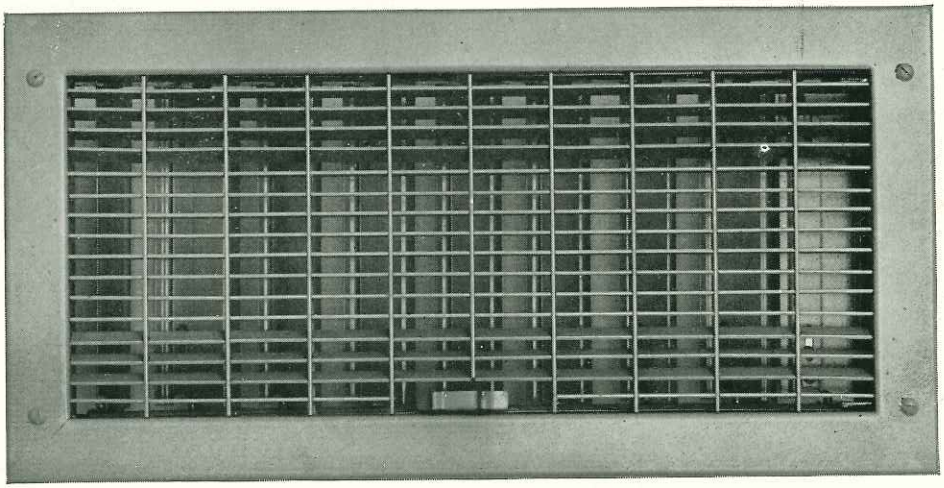


The Air Conditioning Industry has experienced many new and vitally important developments during the last few years, but it rested on our shoulders to develop the last word in REGISTERS.

The "Arc-Eng" is the fulfillment of the demands of the Architects and Engineers, the world over, for 100% flexible type of Register. Items now on the market give **either** direction **or** control, but our new Register gives absolute control of volume **and** (in addition) a real ALL WAY DEFLECTION, all of which are adjustable from the front.

To enable the Engineer to ADJUST THE AIR DIRECTION and CONTROL FROM THE FRONT OF THE REGISTER AFTER installation has been made, we offer the No. 3310 "Arc-Eng".

Depth of Shutters fully opened is 3⅛ inches.



Depth of Shutters closed is 2½ inches.

Style No. 3310 ARC-ENG

This register has the famous "FABRIKATED" face and the equally famous "ARC-ENG" adjustable shutters. The construction of the face gives exceptional strength. The interior steel bars are assembled, blocked together under heavy pressure, and the assembly securely attached to a welded outside angle frame. This gives, in the face, the depth of design demanded by the Architect, large free air capacity required by the Engineer, and directional flow needed by the installer or Engineer.

And to this face is attached the NEW AIR CONDITIONING TRIUMPH, the "Arc-Eng" adjustable shutters which permits any desired control. Any number of individual valves or shutters can be set and locked in any desired position yet the balance of the shutters will operate in the normal way. Part of the valves can be entirely closed, others partly opened, others set for a jet effect, some in a spread effect ALL IN THE SAME ASSEMBLY OF ADJUSTABLE SHUTTERS.

For List Prices See Table No. 17 in List Prices.

* Patent Pending.

* Used by permission of Register & Grille Mfg. Co.

DIRECTIONAL AND VOLUME CONTROL

*ARC ENG
ARCHITECT ENGINEER
TRADE MARK

UNLIMITED COMBINATIONS OF SHUTTERS

Deflections in All Directions—CLOSED—JET or DIFFUSION

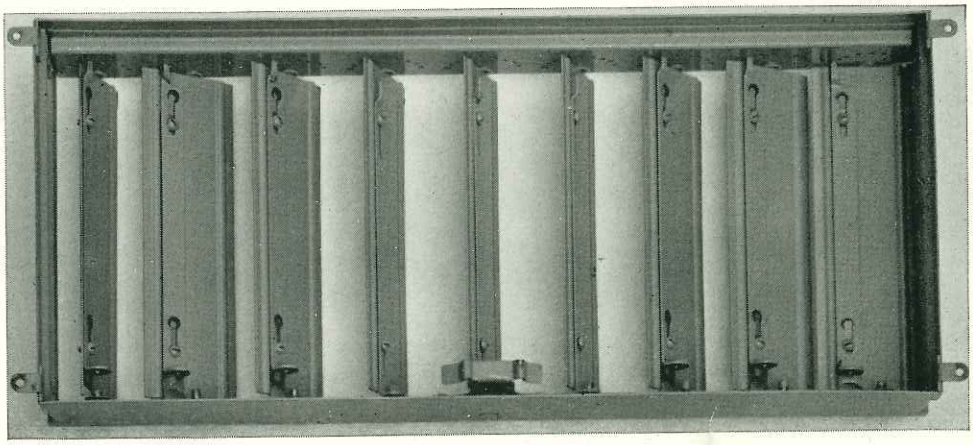
ADJUSTABLE from Front of	STANDARD SIZES	ADAPTABLE
Register after installation	Any multiple of two inches	to any Style of face

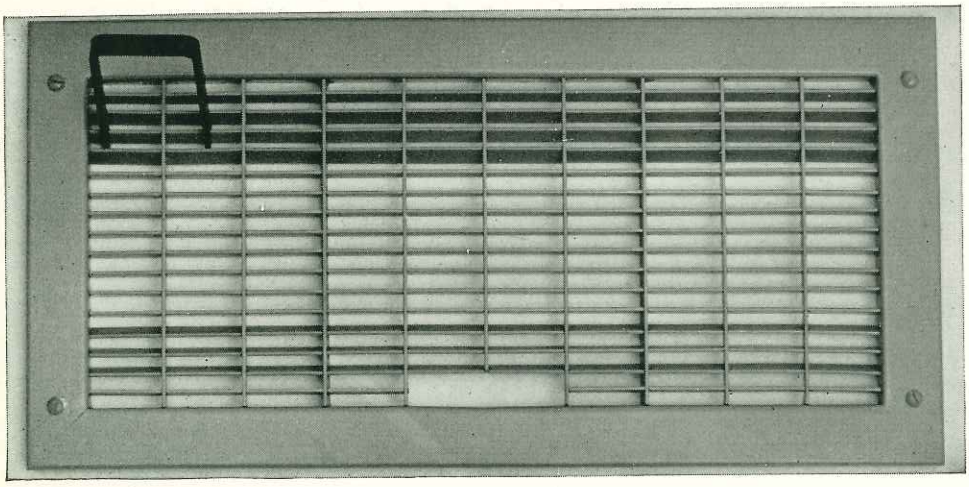
THE ARC-ENG REGISTER will allow any type of adjustment from the front. It is not necessary to remove the register from the opening in order to make any desired adjustments back in the duct proper.

"Arc-Eng" Register Shutters are made in two types.

Type 1 is the adjustable shutter running the long way of the Register.

Type 2 has the adjustable shutters running the short way of the Register.





Depth of shutters closed is 2½ inches.

Depth of shutters fully open is 3⅛ inches.

This style Register Shutter can be applied to any type of Face, Cast Iron or Bronze, Stamped Metal or the "Fabrikated" Airflow type.

Design No. 3310 Face—Adjustable Up—Straight—or Down. On the Job.

The cut of the adjustable Shutter above shows the right shutter completely closed, the next two shutters detached from the operating rod and set for left deflection, the next three shutters are attached to the operating rod and are open approximately 90°, and the three shutters at the left are detached from the operating rod and set for left throw.

Any Shutter or combination of Shutters may be easily detached from the operating rod and closed, or adjusted and locked in place. The remaining shutters will operate in unison opening and closing as the need requires.

This Shutter allows the directional flow of 135° either right and left, or up and down; that is, it will open 45° beyond the full 90° opening. At the point where the pin of the valve sets into the ends of the shutter, brass collars are inserted which avoids rusting. This point is similar in construction to our "Air-Con" and is an exclusive feature of our Registers.

We recommend as the perfect combination the No. 3310 "Arc-Eng" Type 2 with lock control. That Register has the adjustable shutters for control to deflect the air right and left and the adjustable directed airflow face to direct up and down, giving an All Way air deflection. This Register can also be furnished in complete lock or knob control. See page 19.

HOW TO SPECIFY

Always specify horizontal wall setting dimension first. Specify register face by number as shown in this catalog and add the word ARC-ENG.

Specification Example: No. 3310 ARC-ENG type No. 2 which are the cuts shown.

*Patent Pending.

* Used by permission of Register & Grille Mfg. Co.

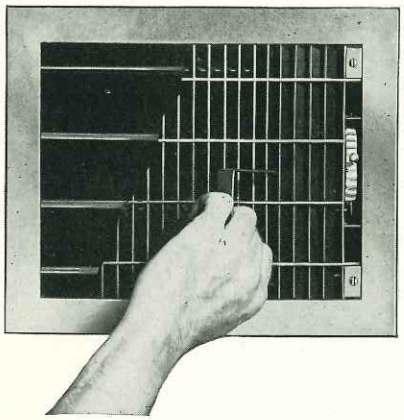
THE AIR-CON*

AIR-CONTROL
(Trade Mark)

DIRECTIONAL CONTROL REGISTER SHUTTER

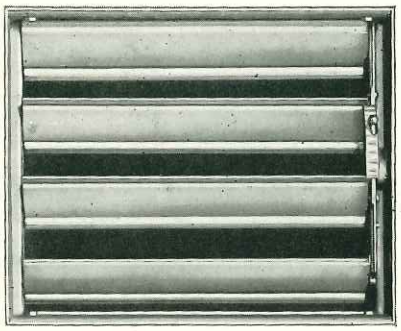
FOR USE WITH ANY STYLE OF REGISTER FACE

The AIR-CON Register replaces the old standard of many years, the multi-valve register; but it has the advantage of the wheel operation, so popular with architects, engineers and contractors and in **addition** allows the directional flow of 135° either right and left, up and down; that is, it will open 45° beyond the full open, or 90°. This makes the **perfect** standard Register for Air Conditioning installations as you change or reverse the air flow direction from cooling to heating merely by the degree of opening or closing the **same** register. All Shutters operate in Unison.

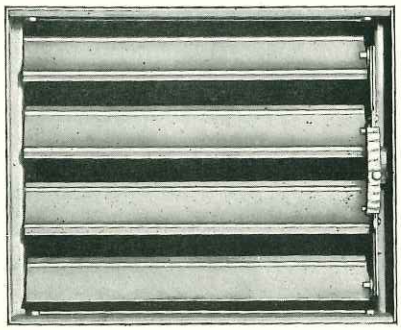


AIR-CON

Bottom two-thirds open. Bottom gives straight throw. Face No. 3320 gives right or left deflection.



AIR-CON
Bottom Full throw open. Deflects air up.



AIR-CON
Bottom one-third open. Deflects air down.

Depth of bottom closed is 2½ inches. Depth of bottom with shutters opened 90 degrees is 3⅛ inches.

This register bottom like the ARC-ENG is made of heavy gauge cold rolled steel. It has the brass collars set at the end of the fan to prevent rusting in humid atmosphere.

HOW TO SPECIFY

REGISTER FACE — Specify by number as shown in our catalog.

REGISTER BOTTOM — Specify by the name AIR-CON.

Example—

No. 370 — AIR-CON means a register face made of No. 12 GA. steel with 13/16" mesh and 3/16" bar, attached to an AIR-CON bottom.

The standard AIR-CON bottom is made with valves or shutters running the long way of the register.

If valves or shutters are required to run the short dimension of opening specify "Valves run short way of register".

This register can be furnished with Lock Control. See cut page No. 19.

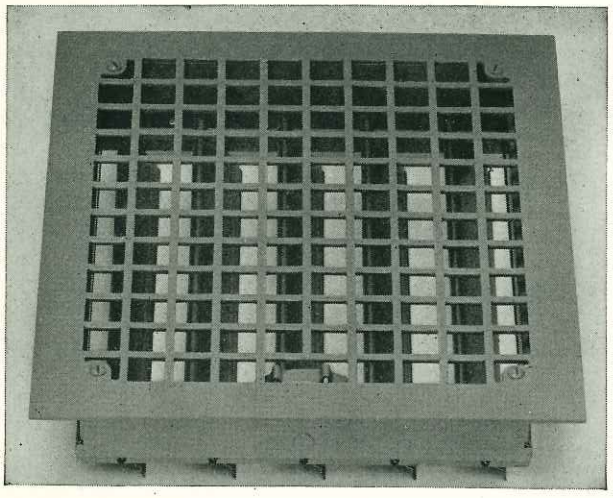
It can also be made with Knob Control. See cut page No. 19.

For standard sizes and list prices see table No. 1 on list price folder.

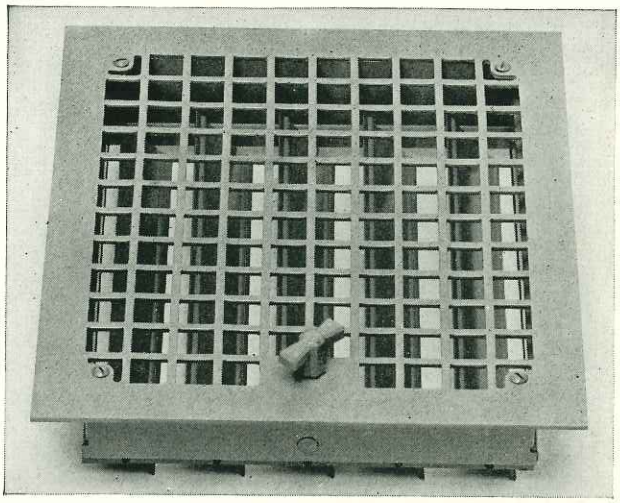
* Used by permission of Register & Grille Mfg. Co.

REGISTERS with multiple shutters or valves are used for the Supply or Exhaust of air in rooms, and are located in either Floor, Walls or Ceiling. Different types of Registers are best suited for each position in the room.

On this page are shown various controls used with the AIR-CON Shutters described on Page 18.



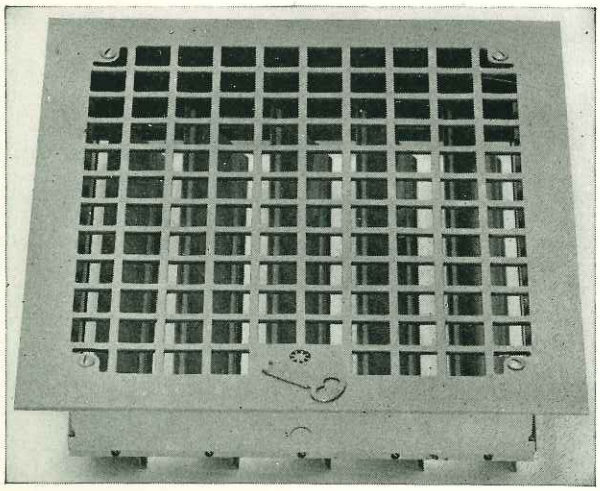
Style No. 370 with Wheel Control.



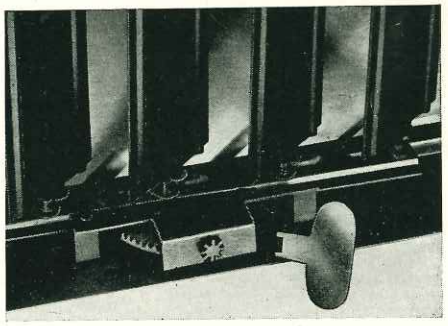
Style No. 370 with Knob Control.

STYLE No. 370 is the All Steel Register. Made of steel, it is easy and light to handle, though strong and sturdy. When used in Walls or Ceiling the gauge of the Face is generally either No. 12 or No. 10 Ga. U.S.S. but when used in the floor we recommend a face thickness of at least No. 8 Gauge. The mesh of the face is $\frac{13}{16}$" opening with a $\frac{3}{16}$" bar giving 66% free area and holding the unit to a 1" combination so popular with the Engineers and Contractors.

Style 360 is made with a Cast Iron, Plain Lattice Design Face attached to the "Air-Con" Steel shutter. This style is used for floor installations and is considered too heavy for wall or ceiling use.



Style No. 3370



All Steel Lock Register Style No. 3370. Semi-Steel Lock Register Style No. 3360. Any Fabrikated type of face can be attached to the Air-Con Lock Shutter. Specify Face Number and Air-Con Lock Shutter. Example No. 3320 Air-Con Lock Shutter. When this register is used with the Fabrikated type of face the face can be removed from the operating shutters and the shutters fastened to the duct in the usual manner.

Close mesh "Fabrikated" Lock Register—Style No. 33.

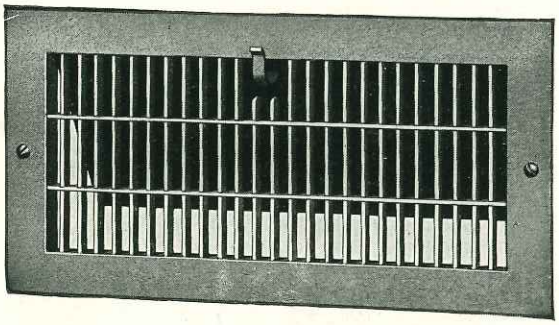
LOCK REGISTERS are necessary when the control of the air is of great importance. We show here the locking feature of our Register. This Bottom can be used with any type of Face Cast, Stamped or "Fabrikated", and with either Plain Lattice Design or Special Design. Lock Registers are generally used in wall and therefore, the All Steel is the most popular type. We call particular attention to the fact that this type of Lock Register is KEY OPERATED. It is not the old type of slide movement which is locked in position. The KEY, making a real lock, must be used. It cannot be operated with a screw driver or similar instrument. The Key fits into a set of Brass gears which in turn operate a saw tooth steel wheel.

For Standard Sizes and List Prices see Table No. 1 on List Price Folder.

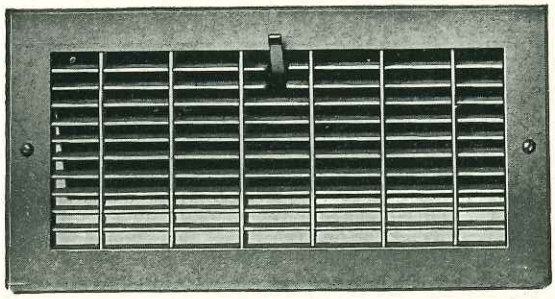
ADJUSTABLE DIRECTED AIRFLOW REGISTERS

The Grille Bars May Be Adjusted to Direct the Air Flow to Any Desired Degree to 45 Degrees

USED FOR SUPPLY DUCTS



No. 3320R—Showing All Bars Set for Straight Air Flow. The No. 3320R differs from the 3310R in that the adjustable Grille Bars are vertical, permitting right and left deflection. Practically any combinations of right and left deflection to 45 degrees.

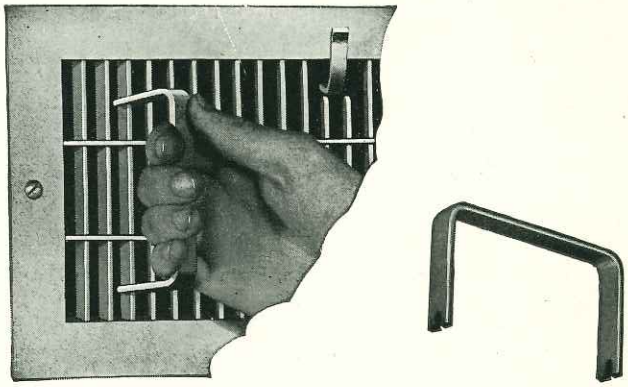


No. 3310R—Showing all Grille Bars set for Straight Air Flow.

The New 3310R and 3320R Adjustable Directed Air Flow Registers fill an ever growing need. With these registers the engineer is in complete control of the direction of air flow.

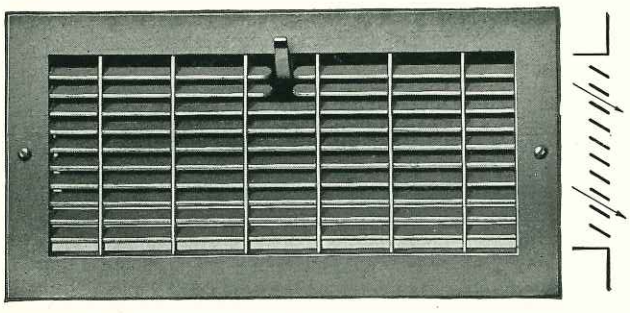
The directional adjustment can be made at the time of installing and after the system is operating it may easily be changed, at any time, to make corrections necessary to meet unforeseen or changed conditions.

The method of adjustment is very simple. With each order is included a tool for turning the grille bars. The picture shows the simplicity of the operation, and the ease with which the bars can be adjusted for any angle of deflection to 45 degrees.

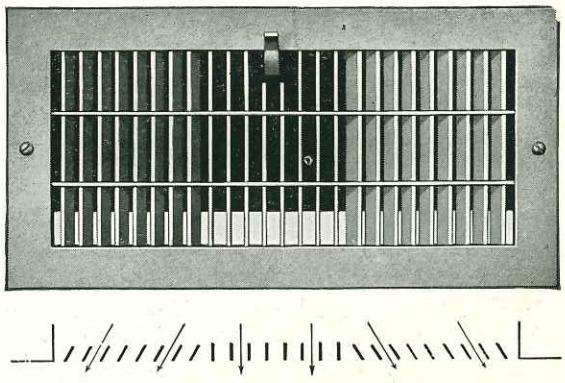


Size of openings in the face: $1\frac{11}{16}$ x $\frac{3}{8}$ inches. Interior Bars: 14 Ga. (.078) x ½ inch Cold Rolled Steel. Face Rim: Cold Rolled Steel

The 3310R or 3320R Register can be furnished with any of the styles of setting frames as shown on Page 26



No. 3310R—Air Flow Downward. Angle of deflection adjustable from straight to 45 degrees, up or down.



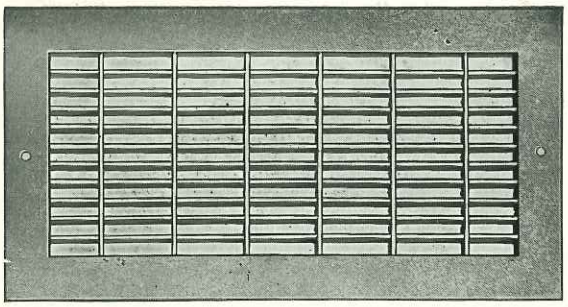
No. 3320R—A Fan Shape in Air Flow Deflection. Two Angles to the Left — One Straight Flow — Two angles to the Right. Any combination desired can be secured.

PATENT OFFICE
NOV 17 1948
DESIGN DIVISION

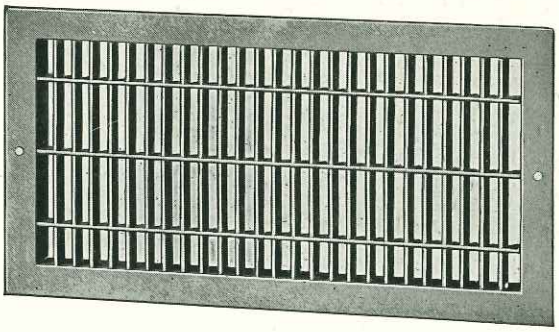
FIXED BAR TYPE AIRFLOW GRILLES

used for exhaust or return air

DESIGN MATCHES THE No. 3310 OR 3320 REGISTERS



Style No. 3311 matches Style No. 3310. Size of openings in the face; $1\frac{11}{16}$" x $\frac{3}{8}$". Interior Bars; 14 Ga. (.078) x $\frac{1}{2}$".



Style No. 3321 matches Style No. 3320. Same specifications for mesh size and Ga. as No. 3311.

These Grilles (or Registers L. V.) are made of Cold Rolled Steel. They can be made to order in Bronze or Aluminum.

The Standard Grilles (or Registers L. V.) do not allow for Air Deflection. They can be made to order with deflections set as specified, that is the bars are set at angles of 22½° or 45° degrees or any combination.

If set deflection up or down is required specify #3311D, with the deflection degree wanted. Example #3311D. 22½—straight—22½ which would give a three way deflection, one third up centre third straight bottom third down.

If set deflection right or left is required specify #3321D. with the deflection degree, or degrees, wanted.

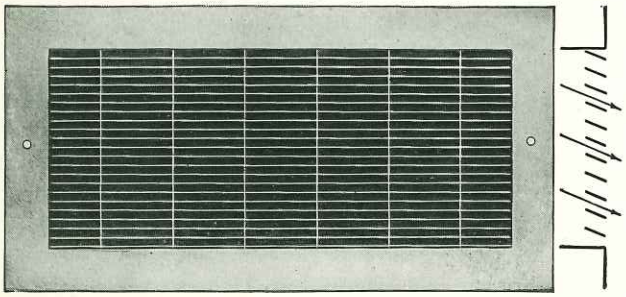
We recommend the No. 3310 or No. 3320 Registers, with the proper type of valves, for Supply and the No. 3311 or No. 3321 Grille for the Exhaust or Return.

REGISTERS LESS VALVES

Often it is desired that the intakes be an exact match in size, and capacity, with the registers used. These can be furnished without valves and without lever slots, and should be ordered giving the number of the design followed by the Letters L.V. Where any of the standard types of frames are required with the returns the specifications should be REGISTER LESS VALVES. This is necessary as Wall Grilles will **not** fit the standard frames.

See Table No. 6 for Standard Sizes and List Prices.

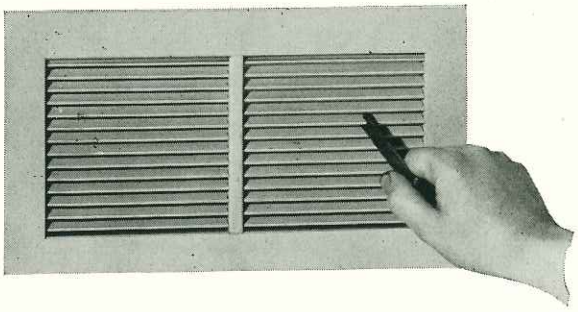
The No. 3312 G may be made to deflect the air up or down or straight ahead.



No. 3312G—With Grille Bars set for Down Throw of 22½°.

This grille has a large, unobstructed free area, approximately—85%—yet is extremely limited in visibility through the grille. The "Fabrikated" construction has back of it many years of proven merit and is accepted by the Heating, Cooling and Ventilating Engineers as engineeringly correct.

AIR CONTROL *Grilles*
BARS ADJUSTABLE IN GROUPS

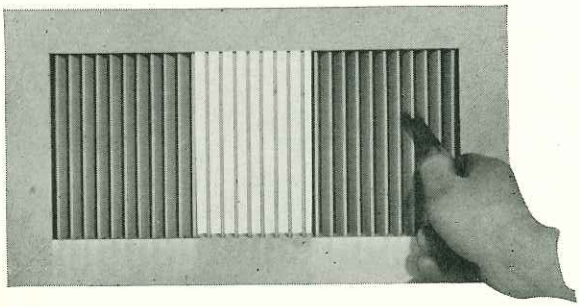


Design No. 500HA

- Bars set in groups for horizontal deflection of air, upward or downward, from straight flow to 45 degrees in either direction.

Bars ½" deep x .083 (No. 14 Ga.) cold rolled steel, round edge, flat bar stock, spaced on ⅜" centers.

On sizes over 10" wide a ⅜" vertical channel is necessary to provide strength and keep bars rigid.



Design No. 500VA

- Bars set in groups for vertical deflection of air, to the right or left from straight flow to 45 degrees to the right and 45 degrees to the left.

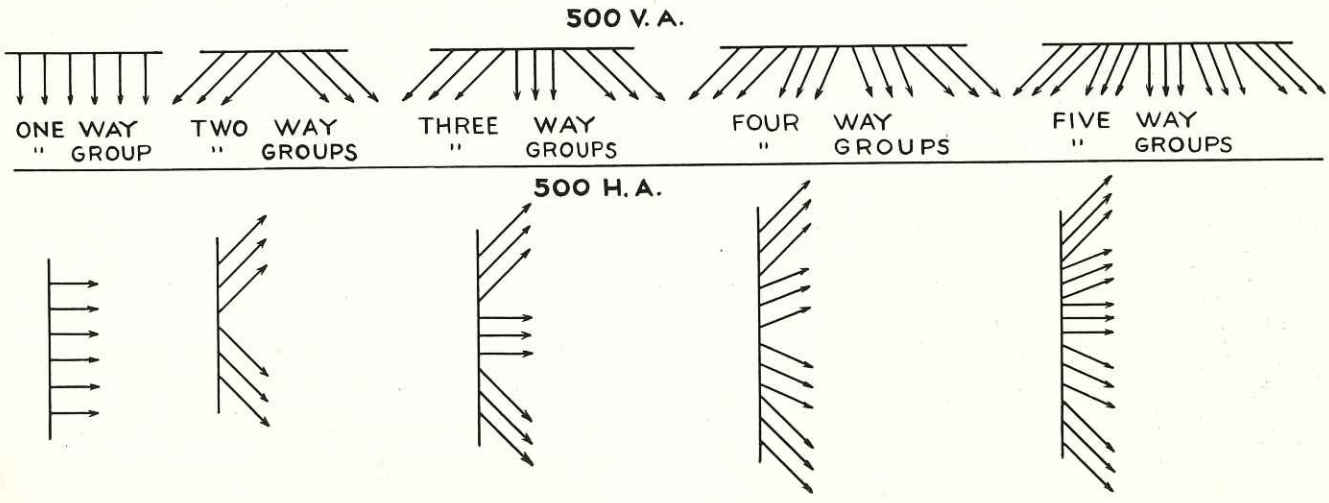
Bars, ½" deep x .083 (No. 14 Ga.) cold rolled steel, round edge, flat bar stock, spaced on ⅜" centers.

On sizes over 10" high a ⅜" horizontal channel is necessary to provide strength and keep bars rigid.

Can also be furnished with operating key attached for adjustment of each group. After adjustment is made, key folds back of ribs to lock bars in rigid position.

We can furnish Air Control Grilles, Bars Adjustable in groups with bars ½" deep x .083 (14 Ga.) steel bars, spaced on ½" centers. When ordering this type, specify 600VA for vertical deflection and 600HA for horizontal deflection.

NOTE: When ordering No. 500HA or No. 500VA grilles specify number of group settings required as shown here.

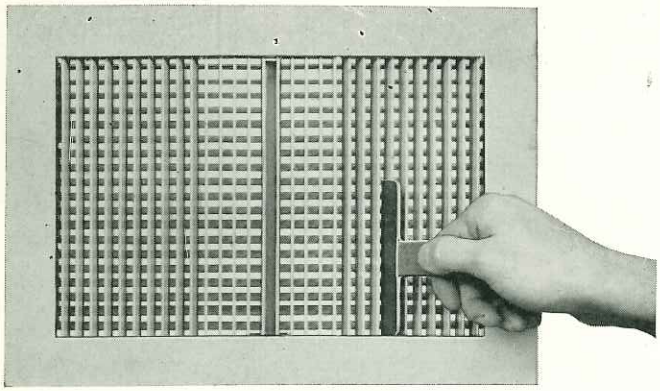


Can be furnished with multiple valve or single dampers attached.

DOUBLE ADJUSTABLE GRILLES

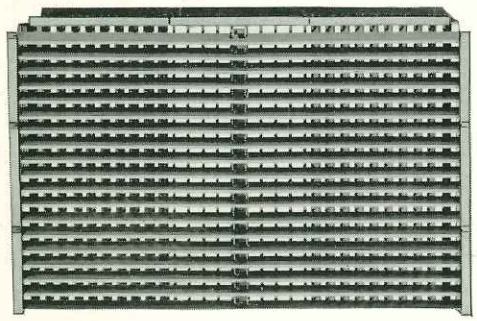
MODERN IN STYLE MODERN IN UTILITY

BARS ON FACE AND BACK ADJUSTABLE IN GROUPS



Design No. 5050 VA

This design has vertical bars on face adjustable in groups and horizontal bars on back adjustable in groups. Back Louvres can be adjusted from face. This combination allows vertical deflection of air to the right or left from straight flow to 45 degrees to the right and 45 degrees to the left, and horizontal deflection of air upward or downward from straight flow to 45 degrees either direction.

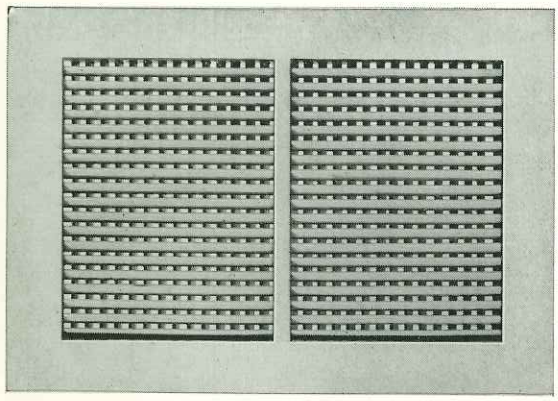


Rear View Design No. 5050 VA

Bars ½" deep x .083 (No. 14 gauge) cold rolled steel round edge flat bar stock, spaced on ⅜" centers.

On sizes over 10" high, a ⅜" channel is necessary to provide strength and keep bars rigid.

NOTE: When ordering, specify number of groups required on face and back.



Design No. 5050 HA

This design has horizontal bars on face adjustable in groups, and vertical bars on back adjustable in groups. This combination allows horizontal deflection of air upward or downward from straight flow to 45 degrees either direction, and vertical deflection of air to the right or left from straight flow to 45 degrees to the right and 45 degrees to the left.

Bars ½" deep x .083 (No. 14 gauge) Cold rolled steel round edge flat bar stock, space on ⅜" centers.

On sizes over 10" wide, a ⅜" channel is necessary to provide strength and keep bars rigid.

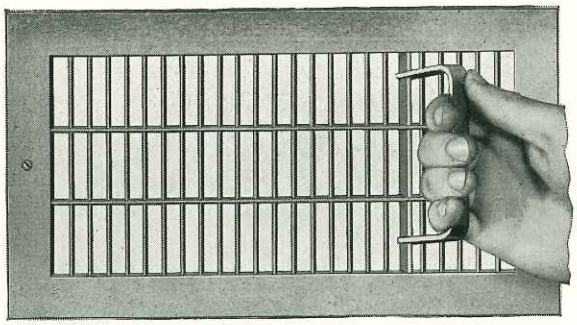
Can be furnished with Multiple Valve Louvres attached on back.

ADJUSTABLE DIRECTED AIRFLOW GRILLES

EVERY GRILLE BAR IS **ADJUSTED INDIVIDUALLY**

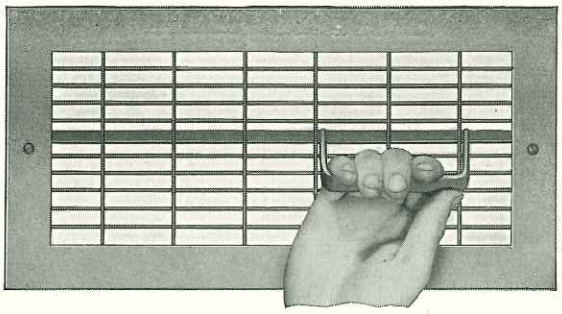
With the use of the individual adjustment of the Grille bars, the most unusual and difficult problems of air flow direction can be successfully solved with the adjustable directed air flow Grille. After the Grille is in position, any Grille bar may be individually operated with the special tool provided. There is no necessity to remove the Grille from the opening. No locking is required. The Grille bars are held firmly in position by cross supports and cannot be adjusted without the special tool. They cannot be easily dislocated nor will they vibrate or rattle.

These Grilles fully solve the problem of the present day requirements of Heating, Cooling and Ventilating Engineers for directed air flow. They are made in any size, either small or large, for home use or commercial buildings.



No. 3320 Grille with adjustable bars running vertically. Size of mesh $1\frac{11}{16}$" x $\frac{3}{8}$". Interior bars $\frac{1}{2}$" deep. No. 14 Gauge Cold Rolled Steel

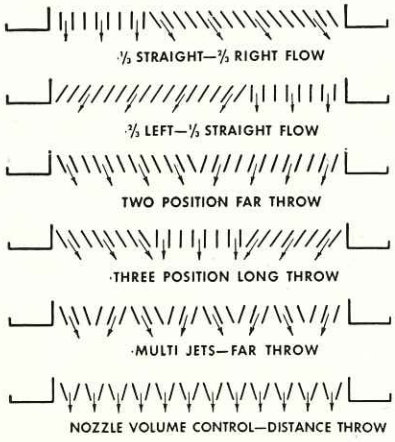
STYLE 3320 Grille deflects from the right to left, 45° to the right and 45° to the left, also in as many combinations as the Engineer requires.

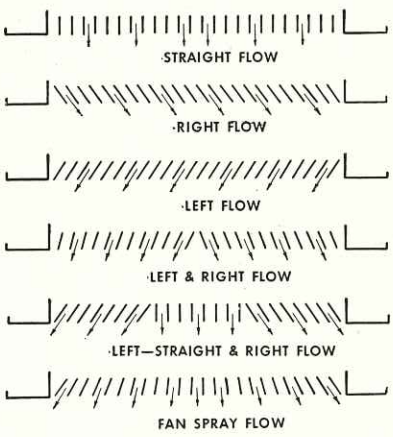


No. 3310 Grille with the adjustable bars running horizontally. Size of mesh $1\frac{11}{16}$" x $\frac{3}{8}$". Interior bars $\frac{1}{2}$" deep. No 14 Gauge Cold Rolled Steel.

STYLE 3310 allows deflection up or down with a full range of 90°, that is, 45° upward to 45° downward, from straight to 45° in either direction and in as many combinations of the adjustment as wanted; all at the will of the Engineer.

We show here a number of suggested adjustments as made with the No. 3320 for right or left deflection. These are the more commonly used types.





NOTE: Adjustable Directed Air Flow Grilles can be supplied in practically any size. Prices furnished upon receipt of specifications

PATENT OFFICE
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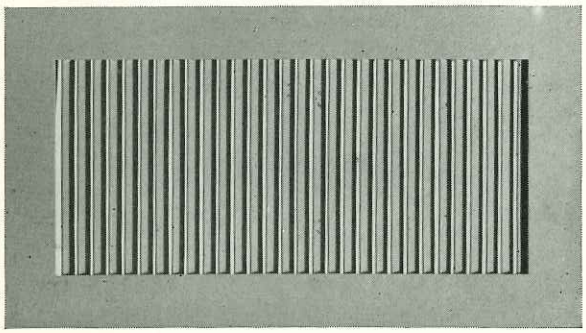
DESIGN DIVISION

STATIONARY BAR TYPE AIR CONTROL GRILLES

Can be used as returns to match supply air control grilles 500VA or 500H as shown on Page 22, or to match the double adjustable grilles 5050VA or 5050HA shown on Page 23.

Also used as supply grilles where air distribution is established.

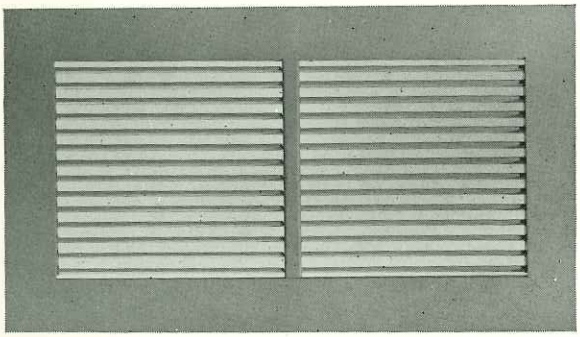
Made of ½" deep x .083 (14 gauge) steel bar stock, spaced on ½" centers.



Design 600 V

Illustration shows bars set 45 degrees one way. Grille bars are fixed at the factory and can be set at angles of 22½ or 45 degrees for air deflection to right or left or straight flow.

Many combinations can be obtained to suit your requirements.



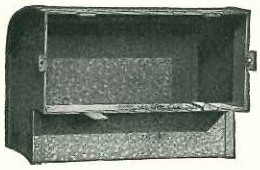
Design 500 H

On sizes over 10" high a ⅜" horizontal channel is necessary to provide strength and keep bars rigid.

Straight ahead air flow. Bars are fixed at the factory and can be set for upward or downward deflection.

On sizes over 10" wide a ⅜" vertical channel is necessary to provide strength and keep bars rigid.

FOUR STYLES OF SETTING FRAMES



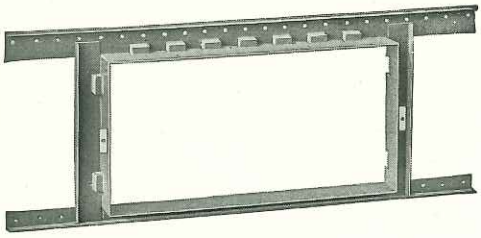
The style desired should be specified when ordering.

Style WO may be installed either before or after lath and plaster.

These frames set inside of the stack head flanges and are usually attached to them by sheet metal straps riveted to the stack head and turned back over the frame. Or, they may be attached by sheet metal screws. Slots are provided in the horizontal dimension; screw holes in the vertical dimension.

The register is screwed to the frame, to complete the installation. **The outer rims of the face cover any plaster deficiency around the stack head.**

STYLE BX FRAME



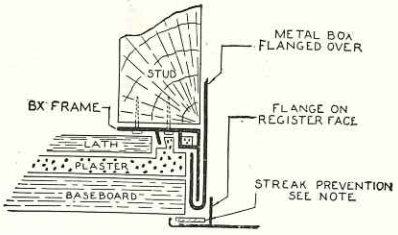
For installation previous to lath and plaster.

Floor to stack head opening, ⅝ inch.

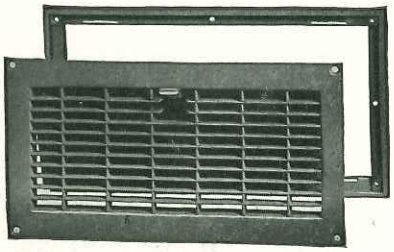
NOTE: The rims of the register faces provide space for Rubber Gaskets to seal the register to the baseboard.

The BX stack head flanges should extend outward from the plaster line the thickness of the baseboard, plus ½ inch, to provide material to be bent backward and over the outside of the frame edges.

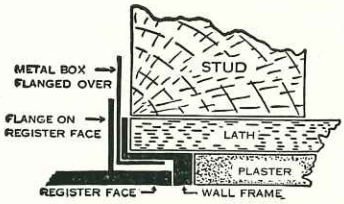
The BX frame arms are of sufficient length so that the stackhead may be located in any position desired between the studs; in the center or at right or left.

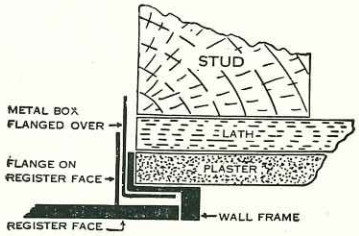


STYLE WT SETTING FRAME — For Installation Before or After Lath and Plaster



The wall frame and register are separate units, the register being removable from the frame. The user has the option of two methods of installation.





TO SET FLUSH WITH THE PLASTER:

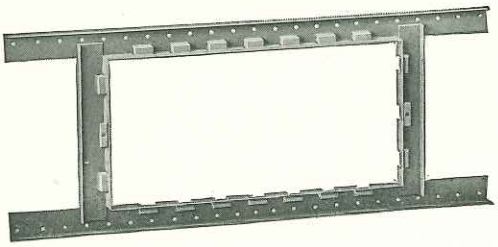
The wall frame to be attached to the stackhead or duct before plastering, so that if the plaster is completed to the frame's outer edges, its outer surface and also the register face will be flush with the plaster.

IMPORTANT: The possibility of plaster cracking or rust discoloration around the frame should be given consideration before deciding upon the flush type of installation.

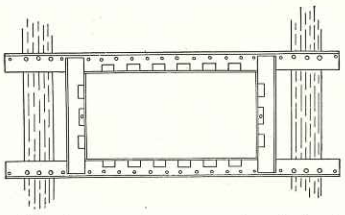
PLASTER SURFACE SETTING:

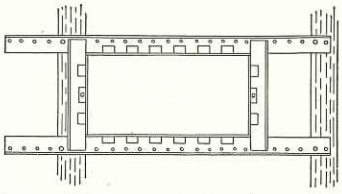
The frame sets on the plaster surface, its outer flange covering any deficiencies in the plaster around the wall opening. With this method the register and frame is installed after the plastering is completed.

STYLE WX — For Installation Before Lath and Plaster

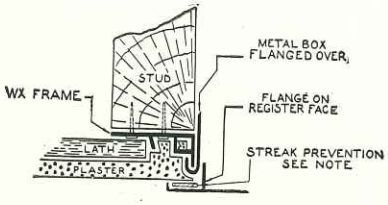


Standard Depth of Frame, ⅝ in.





The frame arms are of sufficient length so that the stack head may be located in any position desired between the studs; in the center or at the right or left.



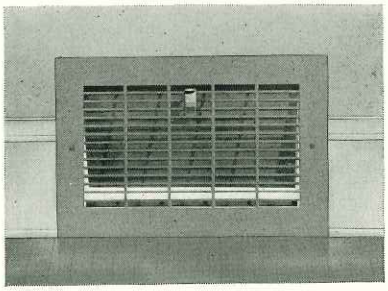
The stack head flanges should be made to extend through the frame opening, and of sufficient length so that they may be bent backward and over the outside of the frame edges, thus securing a tight and rigid connection between the stack head and wall frame. The lath and plaster cover the arms, the plaster when completed being flush with the outer edges of the frame.

To complete the installation the register is screwed to the frame after plastering. **The outer rims of the register face extend beyond the frame edges and cover any plaster deficiency or** cracking around the frame.

NOTE: The rims of the register faces lend themselves to air-tightness, being formed to provide space for Rubber Gaskets to seal the register to the wall.

For Standard Sizes and List Prices See Table No. 11 on List Price Folder.

REGISTERS - GRILLES - AND COLD AIR FACES



Design 21 Sidewall Register

Baseboard registers having 7/8" projection top and two ends with same style face specify design 23.

For baseboard intakes to match specify design 22.

LOW COST

MODERN DESIGN STAMPED

REGISTERS and GRILLES

FOR WARM AIR HEATING AND AIR CONDITIONING

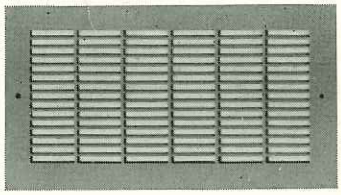
Size of Mesh, $1\frac{13}{16}$" x $\frac{9}{32}$". $\frac{3}{32}$" Horizontal Bars and 1/8" Vertical Bars.

LARGE OPEN AREA
MADE IN ALL STANDARD SIZES

SPONGE RUBBER ATTACHED TO SIDEWALL SUPPLY REGISTERS AND GRILLES

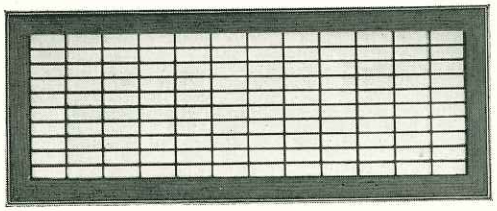
No. 20 grille also carried in stock size sheets 36" x 120" in 18 gauge steel. When other than standard size grilles are required and quick delivery is important, this type of grille can be used very advantageously.

Write for further details.



Design 20 Sidewall Grille

COLD AIR FLOOR FACES



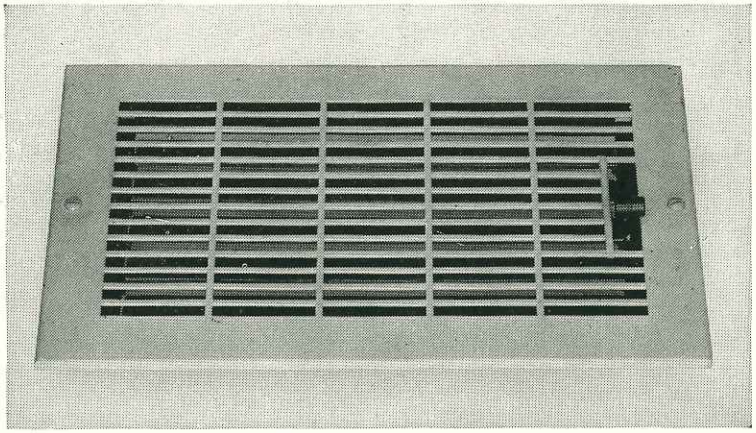
Design 400 Cold Air Face
Size of Mesh—5/8" x $1\frac{13}{16}$"

Cold air faces substantially constructed of flat bar stock, having long strips made of .083 (14 gauge steel) x 1/2" deep, and strips running short way of .083 (14 gauge steel) x 3/4" deep. Large open air capacity; also beveled edges, made in all standard sizes. Furnished in Japanned black, and oak grained finishes.

PATENT OFFICE
NOV 17 1948
DESIGN DIVISION

THIN MAN
TRADE MARK

A **NEW** REGISTER
WITH **NEW** FEATURES.



BETTER PERFORMANCE
AT **LOW** LIST PRICE.

Style No. 1100

DETAILS OF "THIN MAN" SHUTTER
Depth Closed ½" at top and bottom, 1¾" at side of Handle.
Depth Opened 1½" at top and bottom, 2" at side of Handle.

DETAILS OF REGISTER FACE
Mesh size $\frac{9}{32}$ x $1\frac{27}{32}$ — ⅛" bars No. 16 Gauge Steel. Edge turned back, equipped with rubber gaskets.

ECONOMY

Note new **low** List Price.

New **Swivel Socket Lug** permits omission of Frames, (Patent Pending).

PERFORMANCE

From closed position the air stream may be graduated over a radius of 135°, that is, directed down, straight or up. Also note the STOP Points.

THE FACE

The Face is removable, permitting easy and secure anchorage of shutter for streak-proof installation, also for painting wall or redecorating. Sponge rubber gaskets are supplied.

THE SHUTTER

The Shutter is shallow Multiple Valve type, eliminating the objectionable single blade or flapper. It has positive cam leverage operation and is strongly built.

BRASS BEARINGS

Moving parts rotate on **Brass** bearings to minimize rust and clogging.

THE SWIVEL SOCKET LUG (Patent Pending)

By use of this **new** device Metal Frames can be omitted. Wood Screws are furnished for anchoring shutter to stud or buck. Parker Screws are also furnished for anchorage to duct or frame if preferred. The new **Swivel Socket Lug** permits anchoring-screws to set at an angle.

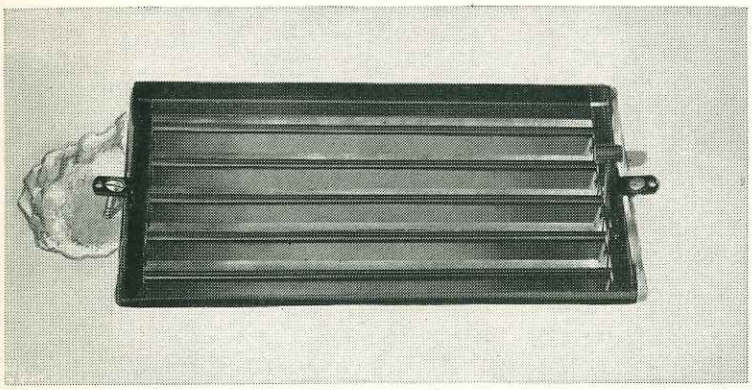
STOP POINTS

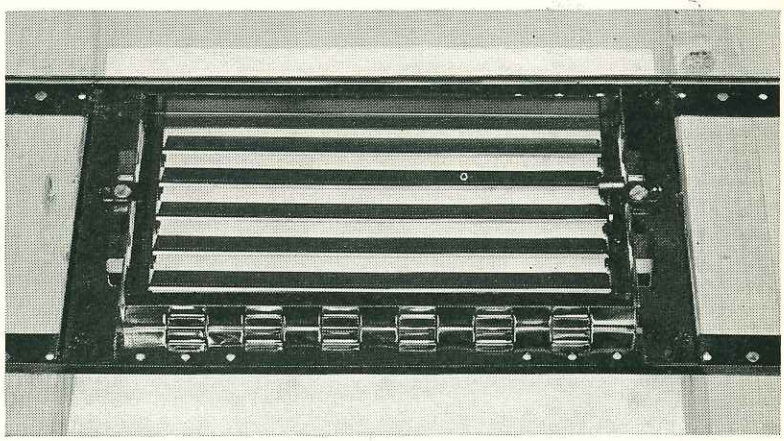
For equalization and control of the heating system the shutter may be set, if desired, to stop at four points as follows:—First Stop curtails air flow for use on short runs. Second Stop gives **downward** deflection. Third Stop gives **straight** throw. Fourth Stop **upward** throw.

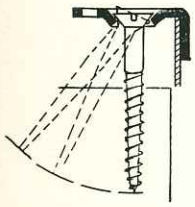
The Stop, when used by the installer, is out of reach and is adjustable only with a No. 1 Phillips Head Screwdriver—therefore it cannot easily be tampered with.

When shipped, stop will be set in No. 4 position permitting complete 135° swing of louvres. An envelope will accompany each Register containing 2—1½" No. 8 Flathead Wood Screws for anchoring shutter to stud or buck, and 2—⅝" No. 10 Parker Screws Type A for anchorage to duct or frame if preferred.

THE SHUTTERS IN DETAIL







Detail of Swivel Lug
(Pat. Pending)

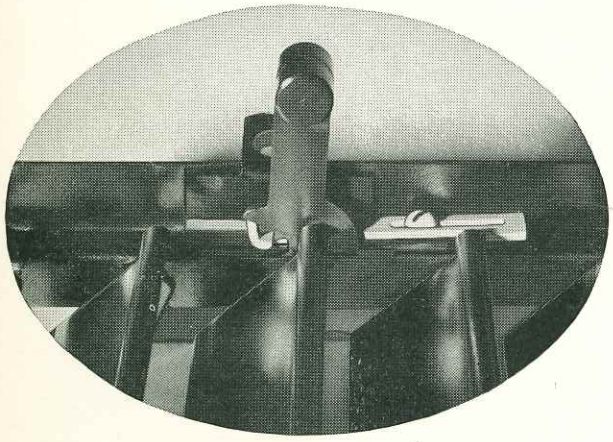
THIN MAN SHUTTER attached to stud or buck by means of Swivel Lug. Note swivel permitted to the screw. A nail would also be effective.

THIN MAN SHUTTER attached to WX Frame. It may be similarly attached to duct or other anchorage.

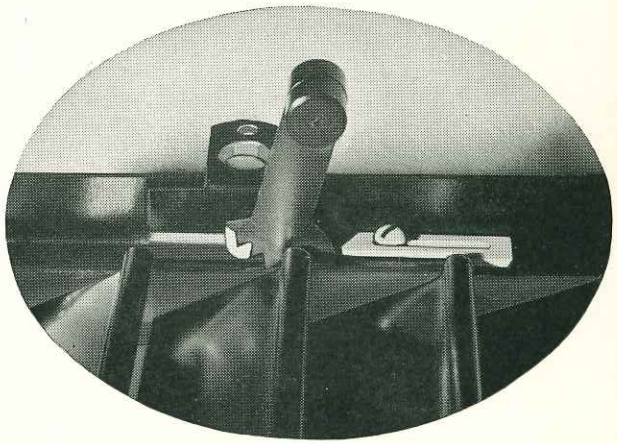
The FACE may be applied at any time after THIN MAN SHUTTER is attached, thus permitting painting or papering of the wall without hindrance of the Face.

All necessary screws are furnished with each Register.

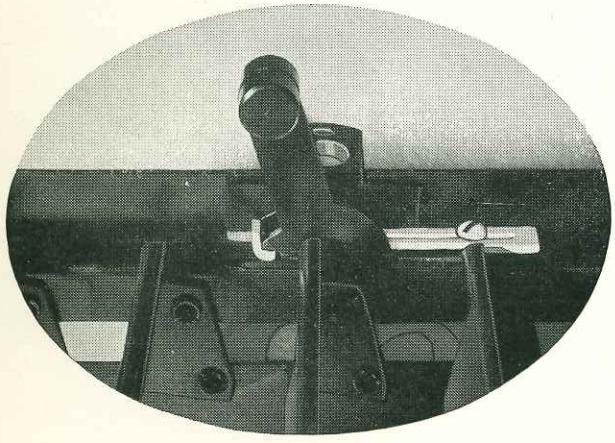
DETAILS OF FOUR STOP POINTS



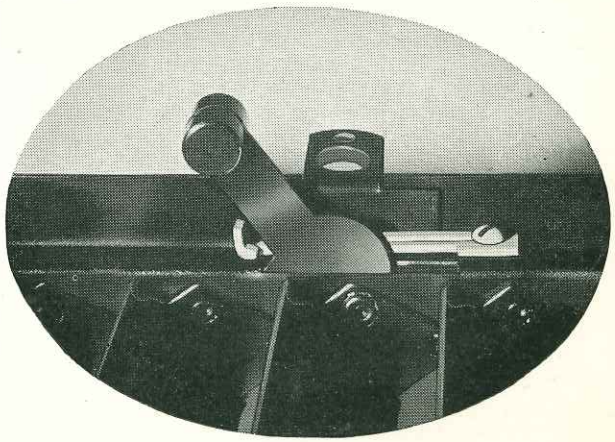
Stop No. 1 at left allows Shutters to open slightly for control on short runs.



Stop No. 2 at right stops the Shutter at downward deflection.



Stop No. 3 at left stops shutter at straight outward throw.



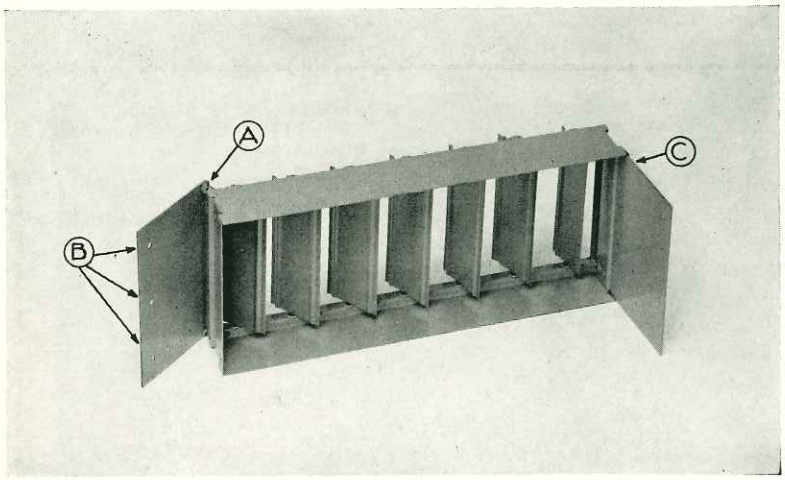
Stop No. 4 at right disengages the stop so that the louvres will operate for an upward throw, or are free for setting at any deflection.

CONTROL of AIR in the DUCT

DIRECTROL

(DIRECTS AND CONTROLS AIR)

The Directrol is designed to divert a portion of the air stream of a larger duct to a branch duct. The volume diverted is determined by the angle at which the Directrol projects into the duct, also, by the selective adjustment of shutters which also directs the air flow into the branch duct. Each shutter is individually adjustable (see detail of "Arc-Eng" on Page 17. The method of securing Louvres in desired position is identical.) When properly installed the Directrol is rigid and will not vibrate.



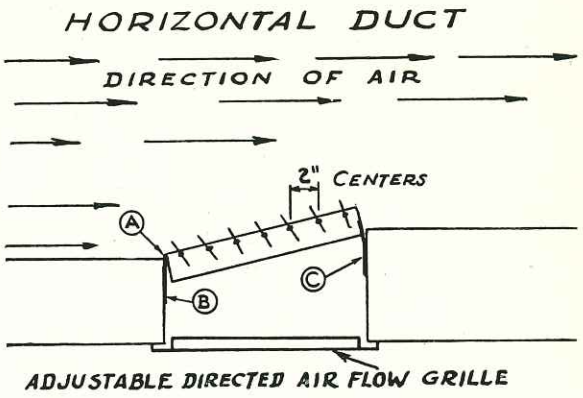
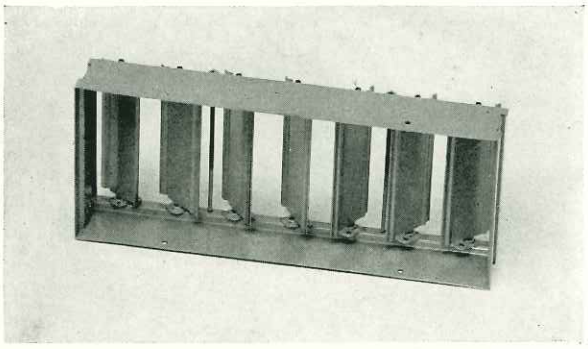


Plate "B" is anchored, by means of screws, to the side of the duct at the junction point. The body of the Directrol is hinged on pivot "A" and swings into the main air stream at the desired angle. The entire unit is then secured in position by flexible Steel Plate "C" which is secured to the opposite side of the branch duct.

THE QUANTROL

(Quantity Control)



An economical louvre to control the quantity and direction of air. It is separate from the Grille and sets back of it.

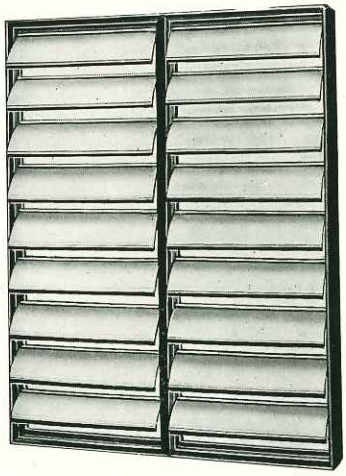
It is regulated at the time system is balanced and should remain permanently with that setting. A later change in setting requires removal of the Grille for access.

Each louvre may be set in any desired position and is held firmly in place by a heavy spring. The sides of the Quantrol are drilled for attaching to duct and metal screws are furnished.

The Quantrol does not do the same work as the Directrol. It is the Engineer's safeguard for positive adjustment of flow of air.

ALUMINUM BACK DRAFT DAMPERS

Also Called Aluminum Back Pressure Dampers



Cut shown above is the rear view of an Aluminum Back Draft Damper. This can be made in any size and is used in the duct to prevent back draft. The Louvres are formed of light but strong Aluminum. The outside frame is built to fit on the inside of the duct opening. Grilles can be used at the end of the duct or the damper itself can be used at the wall line.

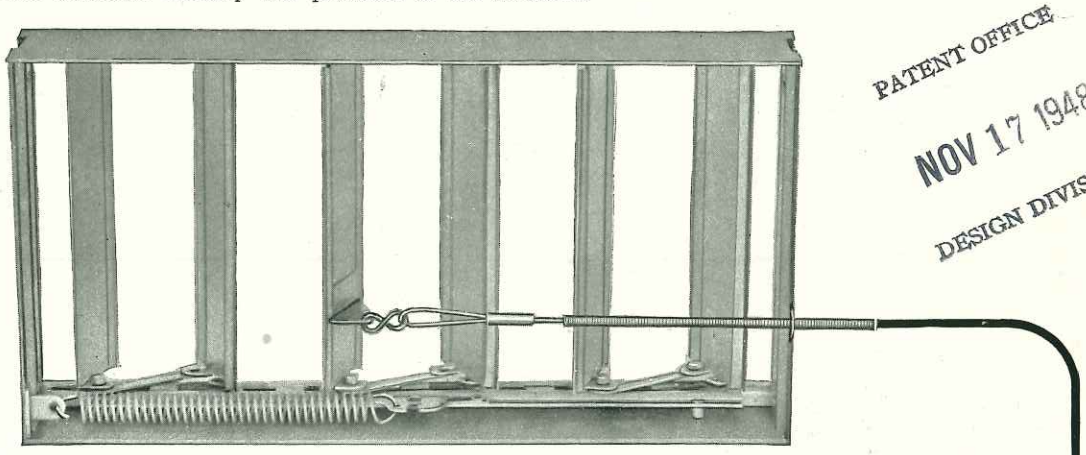
Always specify, by the size of the duct and state which dimension is the width and which dimension is the height.

REMOTE CONTROL

The REMOTE CONTROL has been designed to provide for the regulation of a Register when placed at a level not easily reached.

The Register is set in the required wall location and the wire and cable extended to the Control Box for operation. Figures on the dial indicate clearly the position of the shutters.

We recommend for the perfect control our Arrowtrol Shutter with the Young Regulator Company control handle. This installation is used very extensively in Radio City Buildings in New York City.



ARROWTROL SHUTTERS

PATENT OFFICE
NOV 17 1948
DESIGN DIVISION

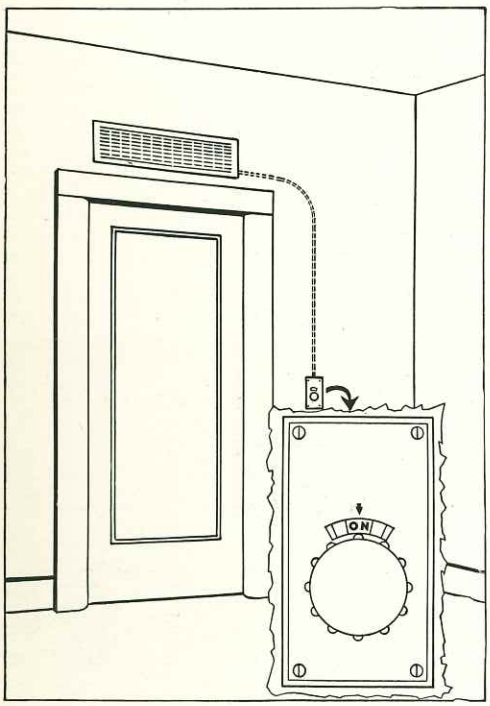
The Arrowtrol shutters can be set back in the duct with any special register or grille at the wall opening; or the Grille can be attached to the Arrowtrol shutter making a complete register at the wall opening. In the latter installation any type of Register Face or Grille can be specified.

The Remote Control consists of five assemblies or items: 1. The Plaster Wall Box. 2. The Control Mechanism. 3. Flush Plate and Knob. 4. Wire and Cable. 5. Arrowtrol Shutters.

The Control Mechanism is fastened to the Wall Box by two screws. The Stainless steel cable and outer control casing is attached to the operating device by a sleeve which consists of a plate fastened by two screws. It is at this point that the proper adjustment of the wire can be made. The other end of the wire is attached to the Arrowtrol Shutters and a heavy Stainless steel spring is used to close the damper and return the wire to its original position. The Cable is flexible and can be bent at any reasonable radius. (Installations have been made with three or four bends with 4" radii and the length of cable from 50 to 60 feet.) We recommend that the cable always be housed in a $\frac{5}{16}$" Copper Tubing.

When the register is installed, and the shutters closed, the knob indicates the "OFF" position. The knob is then turned clockwise to any one of 18 indicated positions, ranging from "OFF" to "ON". When the knob is turned past the "ON" the spring closes the shutters of the Arrowtrol.

The ratchet wheel in the machanism assures a positive lock. Friction is not used. The knob can be removed after the shutters are set so that the Control can be locked in position if required.



Remote Control

Detail Information.

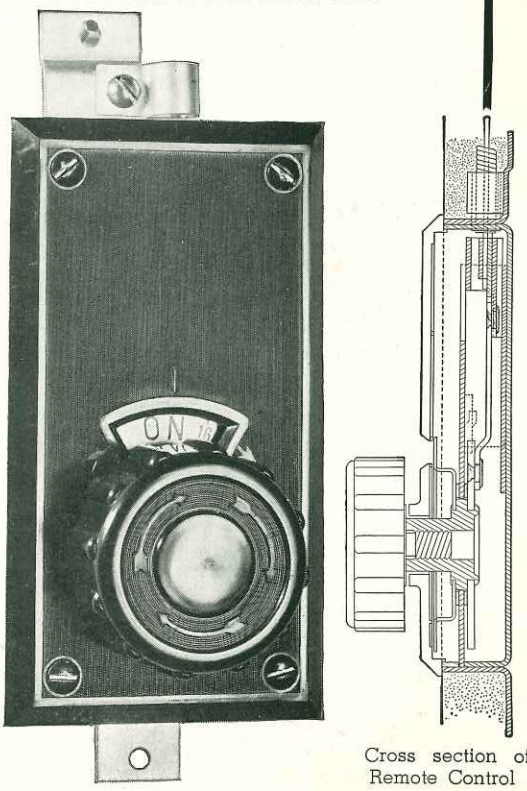
PLASTER WALL Box size is 2½" wide by 4¾" high by ¾" deep. Two lugs and screws fasten the Wall Box to the partition.

FLUSH PLATE size is 2¾" wide by 5" high. Made of Dark Brown Bakelite. Plate has a curved slot, behind which is the dial showing "ON" and "OFF", ¼" ½" ¾" and a total of sixteen adjustments.

CONTROL KNOB size is $1\frac{5}{16}$" diameter knurled in the outer rim.

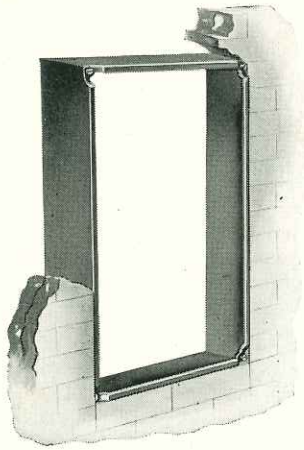
WIRE CABLE AND CASING. Seven (7) feet furnished as standard. (Any length can be order.)

The escutcheon and knob are made of dark brown bakelite or ivory finish. Other finishes may be had if desired.



Cross section of Remote Control

SPECIALTIES



Reverse Bevel Wall Frame

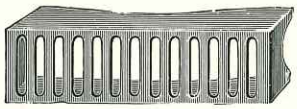
The Wall Frame is being revived by Architects, Engineers and Contractors. Made in depths of either 2" or 4". The frame is installed while the walls are being built, insuring a strong and rigid backing for the register or grille. Wood bucks or other types of frames are unnecessary. It speeds up deliveries because the registers or grilles must be ordered with the frames to assure a perfect fit.

When ordering, specify the size of the register or grille required and the Reverse Bevel Wall Frame will be properly made to fit.

Made to fit all standard sizes of registers.

A New Frame

Approved by Architects and Engineers as the proper type of installation in a Plaster Wall. The special construction gives a tight and streak proof setting.

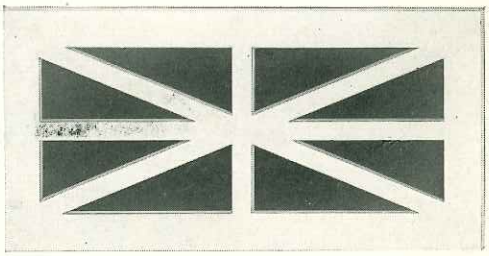


Brick Ventilator

Made in one size only.

Brick size 2¼" x 8".

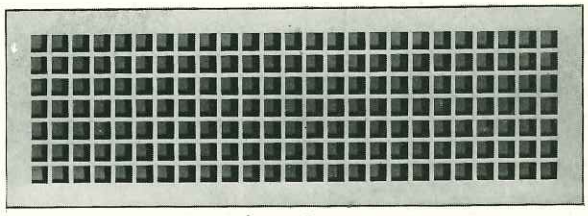
Store Front Grilles

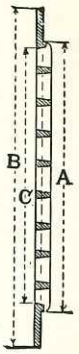


Design No. 3500 Solid Cast Bronze Size 18" x 9" over all.
Front of rim $1\frac{5}{16}$" wide. Back of rim $1\frac{1}{16}$" wide.

The use of Grilles under store front windows is becoming increasingly necessary. Because of weather conditions they should be made of non-ferrous metal. We recommend our Design No. 3500 (shown above). It is made from a standard pattern. MADE ONLY IN CAST BRONZE.

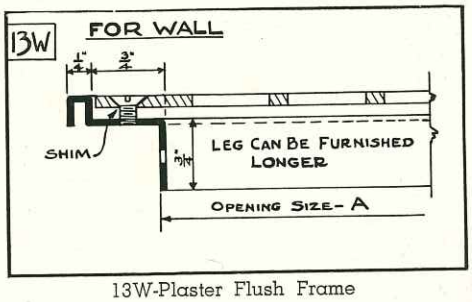
Other designs are also available in either Cast Bronze or Stamped Bronze or Aluminum.





GRILLE

DESIGN 31—Plain Lattice (mesh from ¾ to ⅞ inch approx.) Cast R. & G. Iron. Cast Bronze or Cast Brass if required. Made to order.



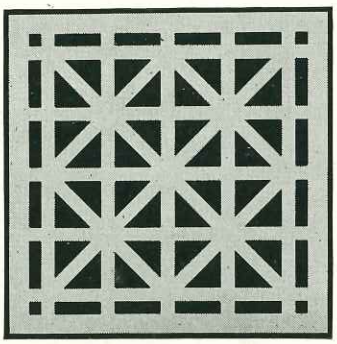
13W-Plaster Flush Frame

For use with any type of Register or Grille. Insures a perfect flush installation with a plaster wall.

Radio Grilles for Loud Speakers

With the growing popularity of room Radios, we offer a grille specially designed for this purpose. Made in either stamped steel, Sheet Bronze or Sheet Aluminum it presents a pleasing appearance at moderate cost. Standard specifications are No. 10 Gauge, Stamped Steel, finish Prime Coat for painting.

Size: Made in one size only, 24½ x 24½ overall. The extreme dimensions can be varied slightly to meet conditions.

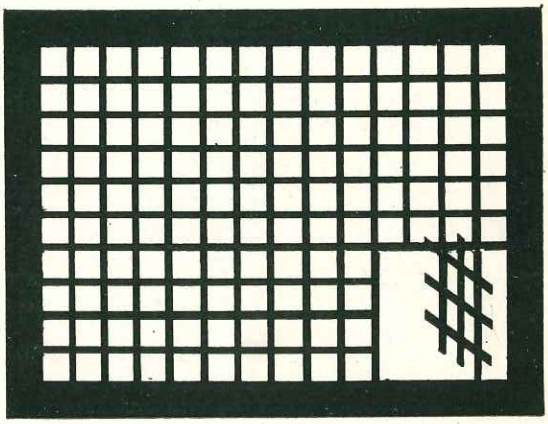


Design No. 3040A

Hand Hole Doors for Access to Valves

Always designate height and width of grille and location of the door.

At right, Plain Lattice Stamped Steel Grille with Hand Hole Door showing pivot hinge, which when closed becomes practically invisible.



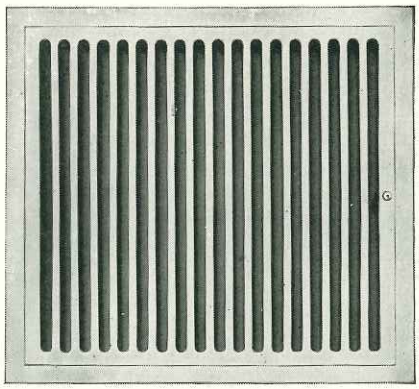
Sanitary Grilles
FOR HOSPITAL USE

Made in Cast Iron or Bronze and Stamped Steel or Bronze

The Sanitary Design is especially recommended for use in Hospitals and Sanitariums where extreme cleanliness is demanded.

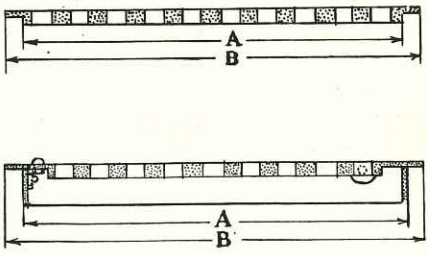
There are no square corners to catch dirt and dust and the smooth surfaces make cleaning an easy task.

The illustration shown at the right is the Sanitary Grille Pivot hinged to an angle frame. The same design may be obtained in the Sanitary type (see line cut at the right of page) and also in the standard register with the Face made in the Sanitary Design.

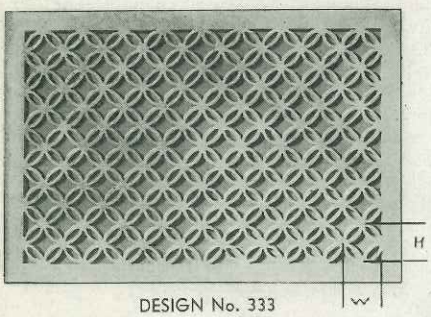


Cast in 3/8" Bar, 3/4" Opening bet. bars
F.A.O. 63%.

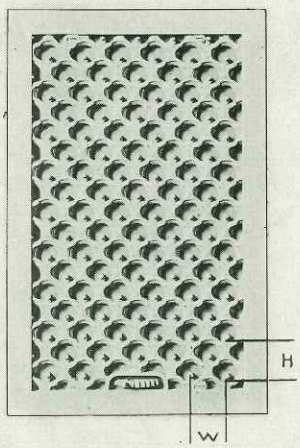
Details of Cast Grille



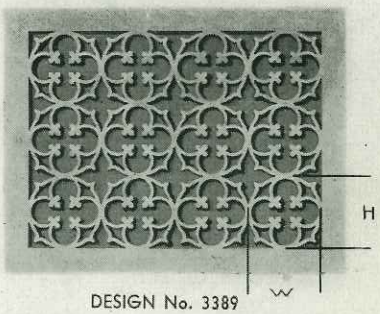
Grilles Cast Special Design



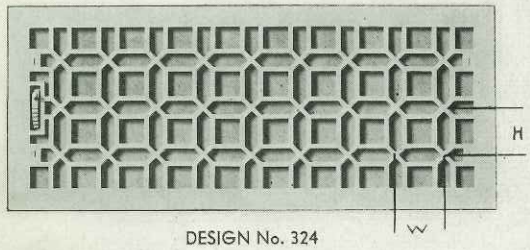
DESIGN No. 333
Unit 3" High x 3" Wide—F.A.O. 59%



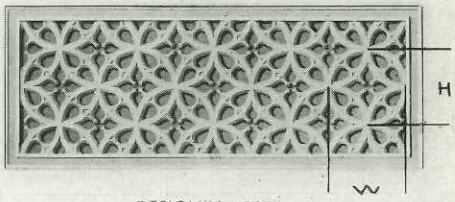
DESIGN No. 330
Unit 2 1/2" High x 2" Wide
F.A.O. 40%



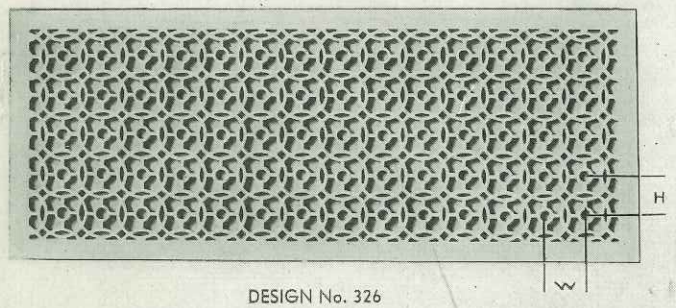
DESIGN No. 3389
Unit 6" High x 6" Wide—F.A.O. 65%



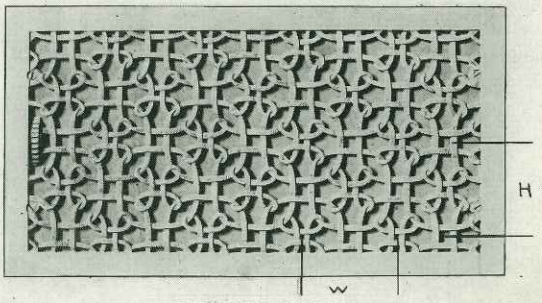
DESIGN No. 324
Unit 2 1/2" High x 2 1/2" Wide—F.A.O. 72%



DESIGN No. 3257
Unit 5 5/8" High x 5 5/8" Wide—F.A.O. 45%

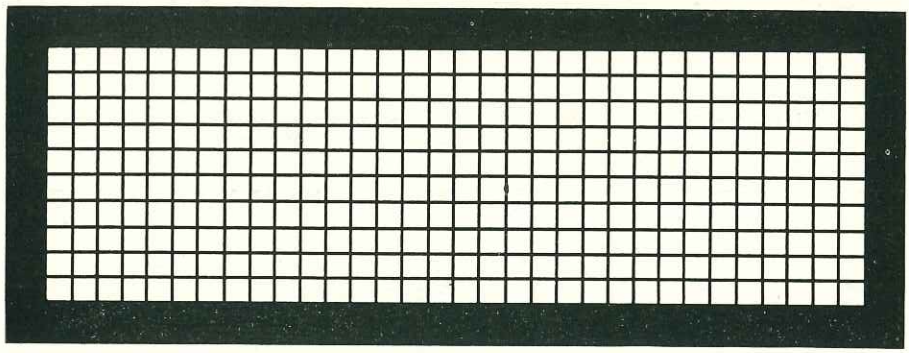


DESIGN No. 326
Unit 2 1/4" High x 2 1/4" Wide—F.A.O 50%



DESIGN No. 3163
Unit 4" High x 4" Wide—F.A.O. 55%

PLAIN LATTICE DESIGN



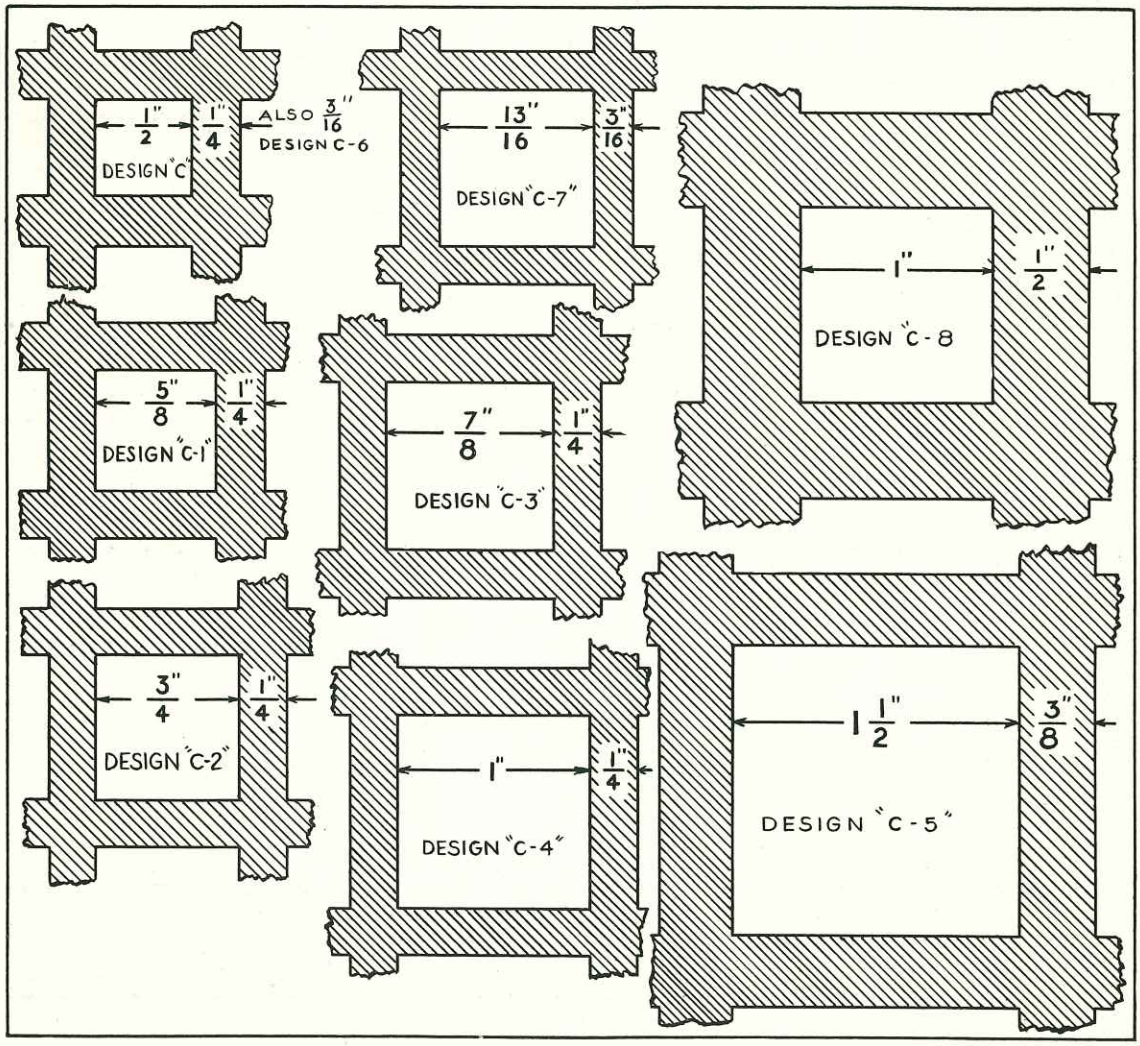
PATENT OFFICE NOV 17 1948 DESIGN DIVISION

Standard Stamping offers to the architects, engineers and contractors a selection of stamped grilles, plain and ornamental.

All of our stamped grilles are made of cold rolled steel.

However, stamped grilles can also be made of Sheet Bronze, Brass, Aluminum, Stainless Steel and Monel Metal.

Details following illustrate some of the designs we manufacture.

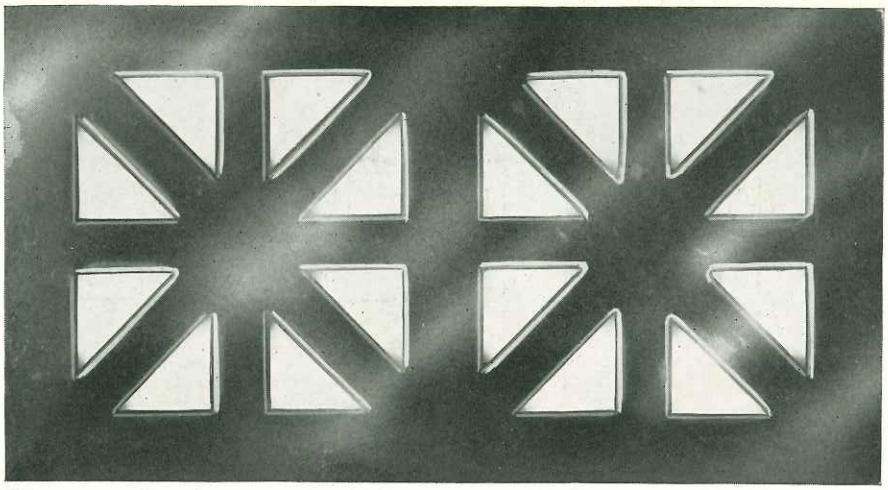


STAMPED GRILLES — PLAIN LATTICE DESIGNS

Table showing Opening Sizes, Size of Mesh, Size of Bar and Free Area

Design No.	C	C-6	C-1	C-2	C-7	C-3	C-4	C-5	C-8	Design No.	C	C-6	C-1	C-2	C-7	C-3	C-4	C-5	C-8
Size of Mesh	1/2"	1/2"	5/8"	3/4"	13/16"	7/8"	1"	1 1/2"	1"	Size of Mesh	1/2"	1/2"	5/8"	3/4"	13/16"	7/8"	1"	1 1/2"	1"
Size of Bar	1/4"	3/16"	1/4"	1/4"	3/16"	1/4"	1/4"	3/8"	1/2"	Size of Bar	1/4"	3/16"	1/4"	1/4"	3/16"	1/4"	1/4"	3/8"	1/2"
Free Area	45%	53%	50%	57%	66%	60%	64%	72%	45%	Free Area	45%	53%	50%	57%	66%	60%	64%	72%	45%
No. of Openings	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	No. of Openings	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size	Opening Size
1	1/2	1/2	5/8	3/4	13/16	7/8	1	1 1/2	1	27	20	18 3/8	23 3/8	26 3/4	26 13/16	30 1/8	33 1/2	50 1/4	40
2	1 1/4	1 3/16	1 1/2	1 3/4	1 13/16	2	2 1/4	3 3/8	2 1/2	28	20 3/4	19 1/16	24 1/4	27 3/4	27 13/16	31 1/4	34 3/4	52 1/8	41 1/2
3	2	1 7/8	2 3/8	2 3/4	2 13/16	3 1/8	3 1/2	5 1/4	4	29	21 1/2	19 3/4	25 1/8	28 3/4	28 13/16	32 3/8	36	54	43
4	2 3/4	2 3/16	3 1/4	3 3/4	3 13/16	4 1/4	4 3/4	7 1/8	5 1/2	30	22 1/4	20 7/16	26	29 3/4	29 13/16	33 1/2	37 1/4	55 7/8	44 1/2
5	3 1/2	3 1/4	4 1/8	4 3/4	4 13/16	5 3/8	6	9	7	31	23	21 1/8	26 7/8	30 3/4	30 13/16	34 5/8	38 1/2	57 3/4	46
6	4 1/4	3 15/16	5	5 3/4	5 13/16	6 1/2	7 1/4	10 7/8	8 1/2	32	23 3/4	21 13/16	27 3/4	31 3/4	31 13/16	35 3/4	39 3/4	59 5/8	47 1/2
7	5	4 5/8	5 7/8	6 3/4	6 13/16	7 5/8	8 1/2	12 3/4	10	33	24 1/2	22 1/2	28 5/8	32 3/4	32 13/16	36 7/8	41	61 1/2	49
8	5 3/4	5 5/16	6 3/4	7 3/4	7 13/16	8 3/4	9 3/4	14 5/8	11 1/2	34	25 1/4	23 3/16	29 1/2	33 3/4	33 13/16	38	42 1/4	63 3/8	50 1/2
9	6 1/2	6	7 5/8	8 3/4	8 13/16	9 7/8	11	16 1/2	13	35	26	23 7/8	30 3/8	34 3/4	34 13/16	39 1/8	43 1/2	65 1/4	52
10	7 1/4	6 11/16	8 1/2	9 3/4	9 13/16	11	12 1/4	18 3/8	14 1/2	36	26 3/4	24 9/16	31 1/4	35 3/4	35 13/16	40 1/4	44 3/4	67 1/8	53 1/2
11	8	7 3/8	9 3/8	10 3/4	10 13/16	12 1/8	13 1/2	20 1/4	16	37	27 1/2	25 1/4	32 1/8	36 3/4	36 13/16	41 3/8	46	69	55
12	8 3/4	8 1/16	10 1/4	11 3/4	11 13/16	13 1/4	14 3/4	22 1/8	17 1/2	38	28 1/4	25 15/16	33	37 3/4	37 13/16	42 1/2	47 1/4	70 7/8	56 1/2
13	9 1/2	8 3/4	11 1/8	12 3/4	12 13/16	14 3/8	16	24	19	39	29	26 5/8	33 7/8	38 3/4	38 13/16	43 5/8	48 1/2	72 3/4	58
14	10 1/4	9 7/16	12	13 3/4	13 13/16	15 1/2	17 1/4	25 7/8	20 1/2	40	29 3/4	27 5/16	34 3/4	39 3/4	39 13/16	44 3/4	49 3/4	74 5/8	59 1/2
15	11	10 1/8	12 7/8	14 3/4	14 13/16	16 5/8	18 1/2	27 3/4	22	41	30 1/2	28	35 5/8	40 3/4	40 13/16	45 7/8	51	76 1/2	61
16	11 3/4	10 13/16	13 3/4	15 3/4	15 13/16	17 3/4	19 3/4	29 5/8	23 1/2	42	31 1/4	28 11/16	36 1/2	41 3/4	41 13/16	47	52 1/4	78 3/8	62 1/2
17	12 1/2	11 1/2	14 5/8	16 3/4	16 13/16	18 7/8	21	31 1/2	25	43	32	29 3/8	37 3/8	42 3/4	42 13/16	48 1/8	53 1/2	80 1/4	64
18	13 1/4	12 3/16	15 1/2	17 3/4	17 13/16	20	22 1/4	33 3/8	26 1/2	44	32 3/4	30 1/16	38 1/4	43 3/4	43 13/16	49 1/4	54 3/4	82 1/8	65 1/2
19	14	12 7/8	16 3/8	18 3/4	18 13/16	21 1/8	23 1/2	35 1/4	28	45	33 1/2	30 3/4	39 1/8	44 3/4	44 13/16	50 3/8	56	84	67
20	14 3/4	13 9/16	17 1/4	19 3/4	19 13/16	22 1/4	24 3/4	37 1/8	29 1/2	46	34 1/4	31 7/16	40	45 3/4	45 13/16	51 1/2	57 1/4	85 7/8	68 1/2
21	15 1/2	14 1/4	18 1/8	20 3/4	20 13/16	23 3/8	26	39	31	47	35	32 1/8	40 7/8	46 3/4	46 13/16	52 5/8	58 1/2	87 3/4	70
22	16 1/4	14 15/16	19	21 3/4	21 13/16	24 1/2	27 1/4	40 7/8	32 1/2	48	35 3/4	32 13/16	41 3/4	47 3/4	47 13/16	53 3/4	59 3/4	89 5/8	71 1/2
23	17	15 5/8	19 7/8	22 3/4	22 13/16	25 5/8	28 1/2	42 3/4	34	49	36 1/2	33 1/2	42 5/8	48 3/4	48 13/16	54 7/8	61	91 1/2	73
24	17 3/4	16 5/16	20 3/4	23 3/4	23 13/16	26 3/4	29 3/4	44 5/8	35 1/2	50	37 1/4	34 3/16	43 1/2	49 3/4	49 13/16	56	62 1/4	93 3/8	74 1/2
25	18 1/2	17	21 5/8	24 3/4	24 13/16	27 7/8	31	46 1/2	37	51	38	34 7/8	44 3/8	50 3/4	50 13/16	57 1/8	63 1/2	95 1/4	76
26	19 1/4	17 11/16	22 1/2	25 3/4	25 13/16	29	32 1/4	48 3/8	38 1/2	52	38 3/4	35 9/16	45 1/4	51 3/4	51 13/16	58 1/4	64 3/4	97 1/8	77 1/2

GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

DESIGN E UNION JACK

30% FREE AREA

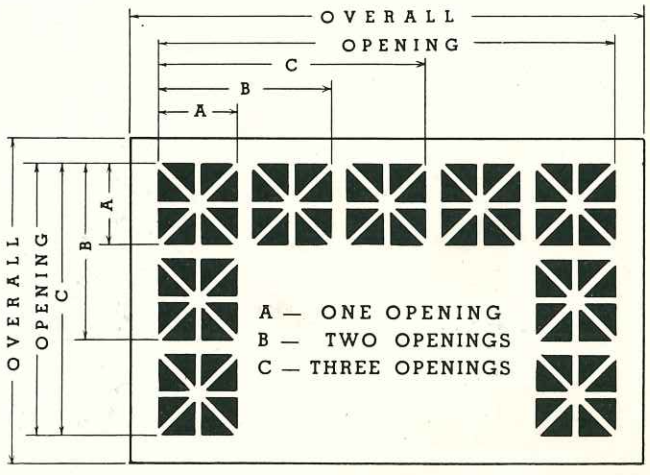
1¾" UNIT ¼" FRETWORK ⅜" BAR

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

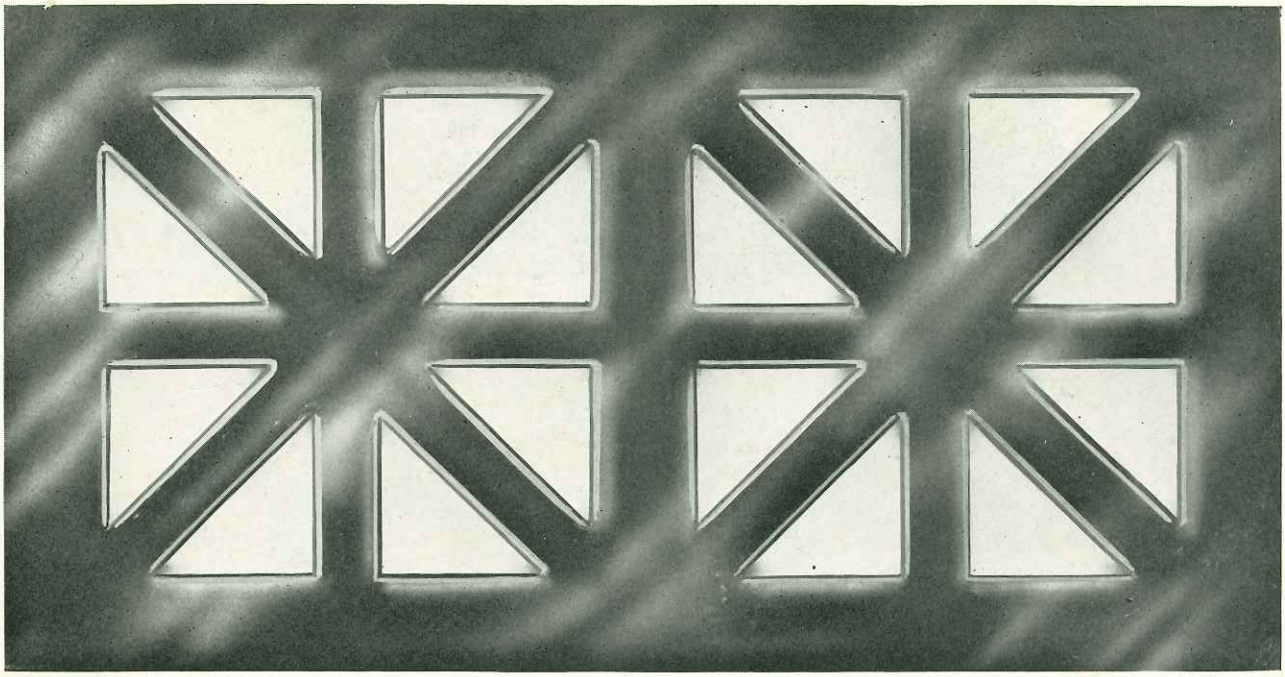
Table of Opening Sizes

No. of Units	Opening	No. of Units	Opening
1	1¾"	26	54⅞"
2	3⅞"	27	57"
3	6"	28	59⅛"
4	8⅛"	29	61¼"
5	10¼"	30	63⅜"
6	12⅜"	31	65½"
7	14½"	32	67⅝"
8	16⅝"	33	69¾"
9	18¾"	34	71⅞"
10	20⅞"	35	74"
11	23"	36	76⅛"
12	25⅛"	37	78¼"
13	27¼"	38	80⅜"
14	29⅜"	39	82½"
15	31½"	40	84⅝"
16	33⅝"	41	86¾"
17	35¾"	42	88⅞"
18	37⅞"	43	91"
19	40"	44	93⅛"
20	42⅛"	45	95¼"
21	44¼"	46	97⅜"
22	46⅜"	47	99½"
23	48½"	48	101⅝"
24	50⅝"	49	103¾"
25	52¾"	50	105⅞"

For additional openings add 2⅛" for each opening.



GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

DESIGN E1 UNION JACK

39% FREE AREA

2½" UNIT 5/16" FRETWORK ½" BAR

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

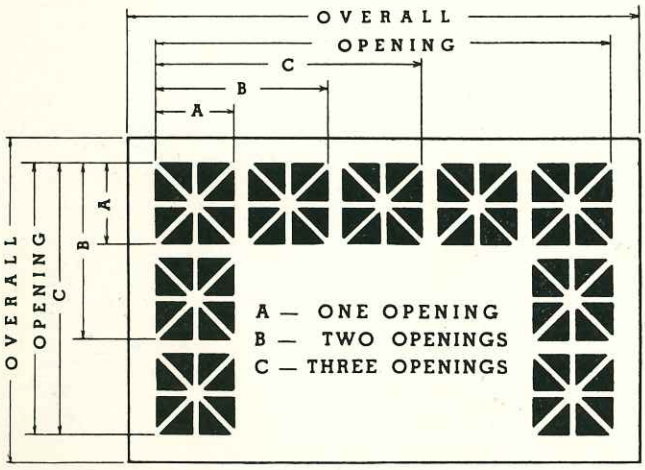
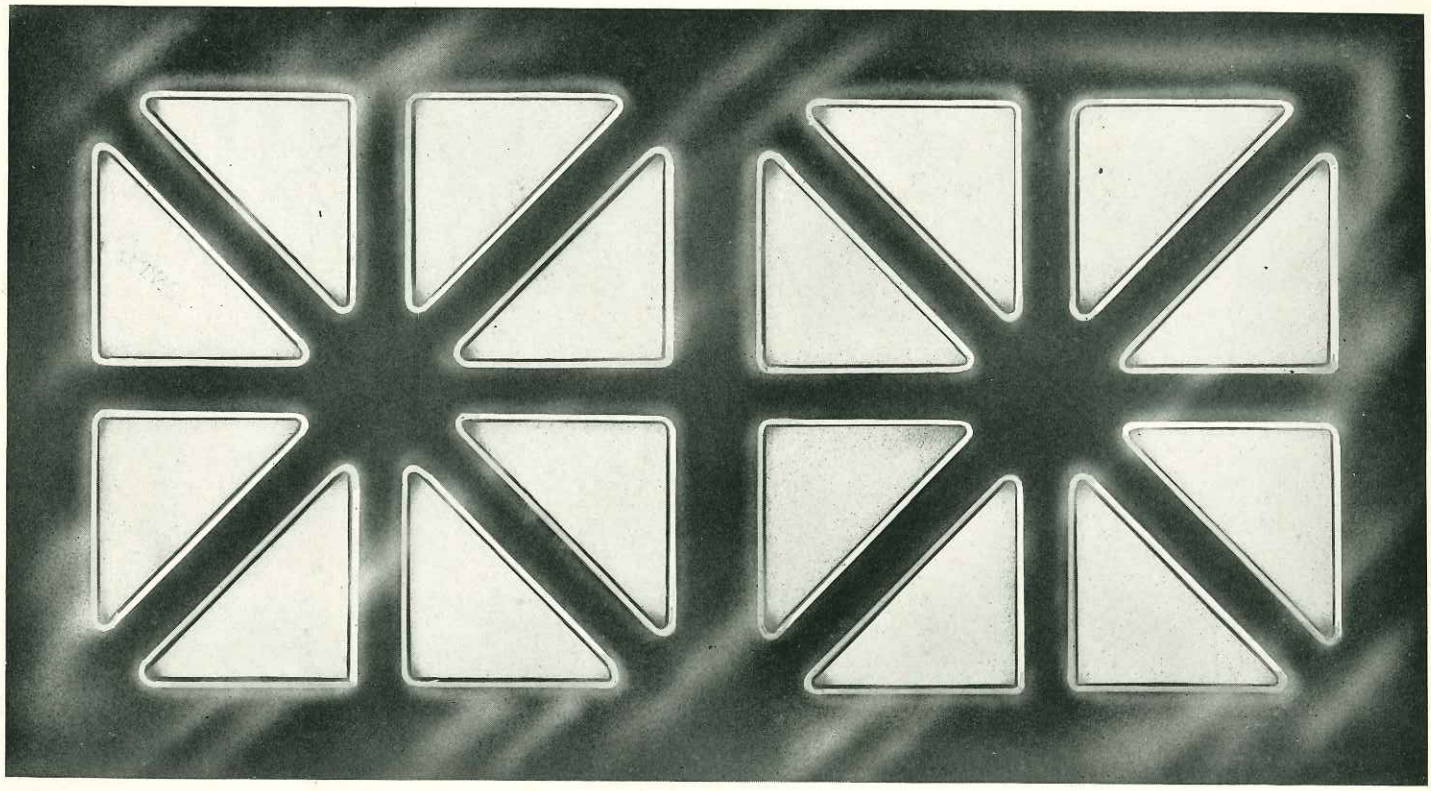


Table of Opening Sizes

No. of Units	Opening	No. of Units	Opening
2	5½"	27	80½"
3	8½"	28	83½"
4	11½"	29	86½"
5	14½"	30	89½"
6	17½"	31	92½"
7	20½"	32	95½"
8	23½"	33	98½"
9	26½"	34	101½"
10	29½"	35	104½"
11	32½"	36	107½"
12	35½"	37	110½"
13	38½"	38	113½"
14	41½"	39	116½"
15	44½"	40	119½"
16	47½"	41	122½"
17	50½"	42	125½"
18	53½"	43	128½"
19	56½"	44	131½"
20	59½"	45	134½"
21	62½"	46	137½"
22	65½"	47	140½"
23	68½"	48	143½"
24	71½"	49	146½"
25	74½"	50	149½"
26	77½"		

For additional openings add 3" for each opening

GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

DESIGN E2 UNION JACK

42% FREE AREA

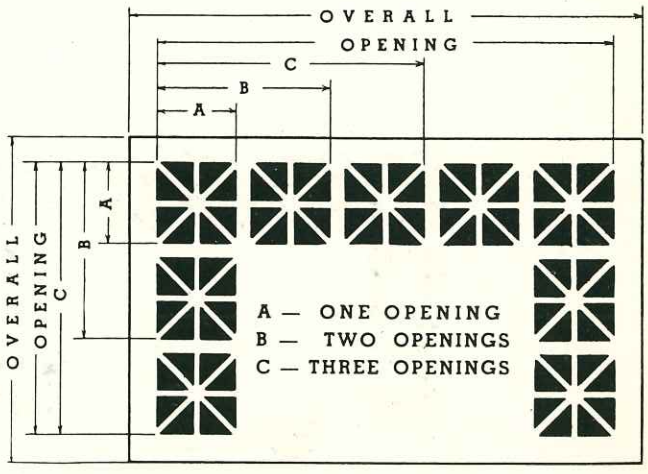
3" UNIT 5/16" FRETWORK ½" BAR

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

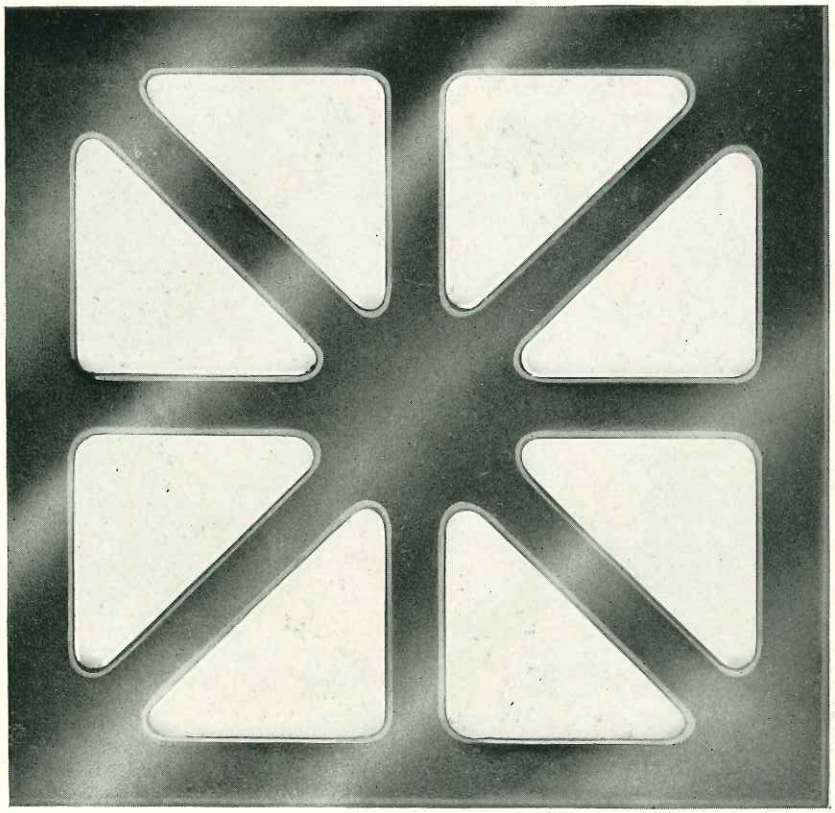
Table of Opening Sizes

No. of Units	Opening	No. of Units	Opening
1	3"	19	66"
2	6½"	20	69½"
3	10"	21	73"
4	13½"	22	76½"
5	17"	23	80"
6	20½"	24	83½"
7	24"	25	87"
8	27½"	26	90½"
9	31"	27	94"
10	34½"	28	97½"
11	38"	29	101"
12	41½"	30	104½"
13	45"	31	108"
14	48½"	32	111½"
15	52"	33	115"
16	55½"	34	118½"
17	59"	35	122"
18	62½"	36	125½"

For additional openings add 3½" for each opening.



GRILLES STAMPED ORNAMENTAL DESIGN



PATENT OFFICE
MAY 17 1948
DESIGN DIVISION

ACTUAL SIZE

DESIGN E3 UNION JACK

48% FREE AREA

3½" UNIT 5/16" FRETWORK ⅜" BAR

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

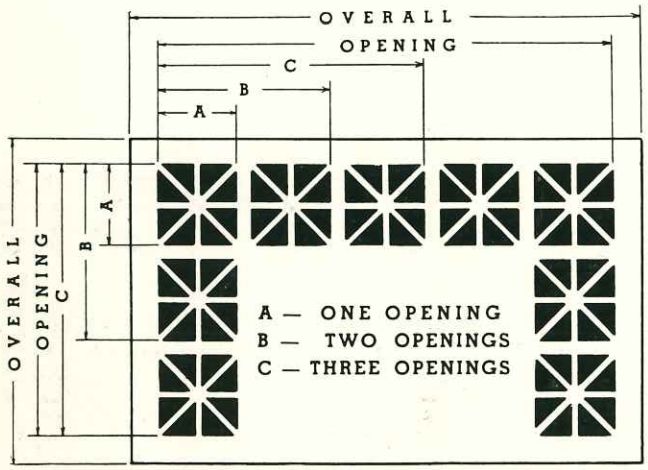


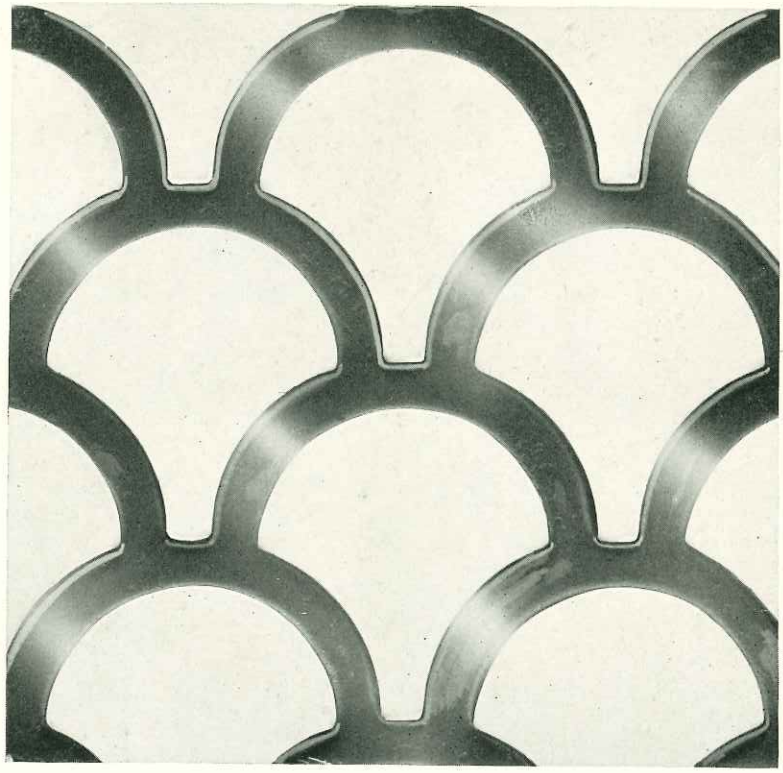
Table of Opening Sizes

No. of Units	Opening	No. of Units	Opening
1	3½"	19	73¼"
2	7⅜"	20	77⅛"
3	11¼"	21	81"
4	15⅛"	22	84⅞"
5	19"	23	88¾"
6	22⅞"	24	92⅝"
7	26¾"	25	96½"
8	30⅝"	26	100⅜"
9	34½"	27	104¼"
10	38⅜"	28	108⅛"
11	42¼"	29	112"
12	46⅛"	30	115⅞"
13	50"	31	119¾"
14	53⅞"	32	123⅝"
15	57¾"	33	127½"
16	61⅝"	34	131⅜"
17	65½"	35	135¼"
18	69⅜"	36	139⅛"

For additional openings add 3⅞" for each opening.

GRILLES STAMPED ORNAMENTAL DESIGN

PATENT OFFICE
NOV 17 1948
DESIGN DIVISION



ACTUAL SIZE

DESIGN K FISH SCALE

65% FREE AREA

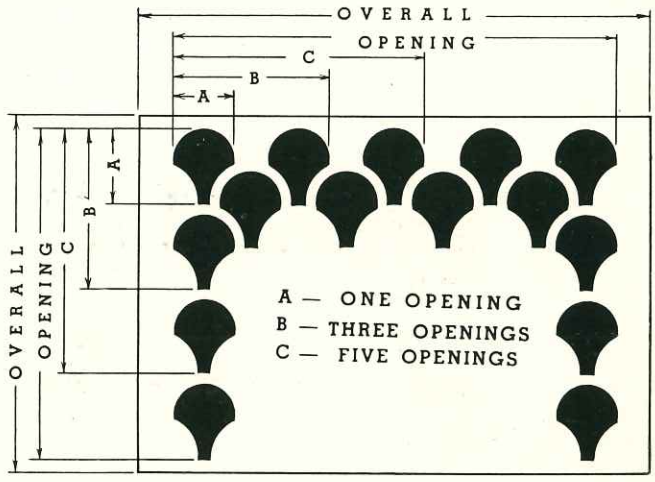
1½" W. x 1⅝" H. UNIT 5/16" FRETWORK

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

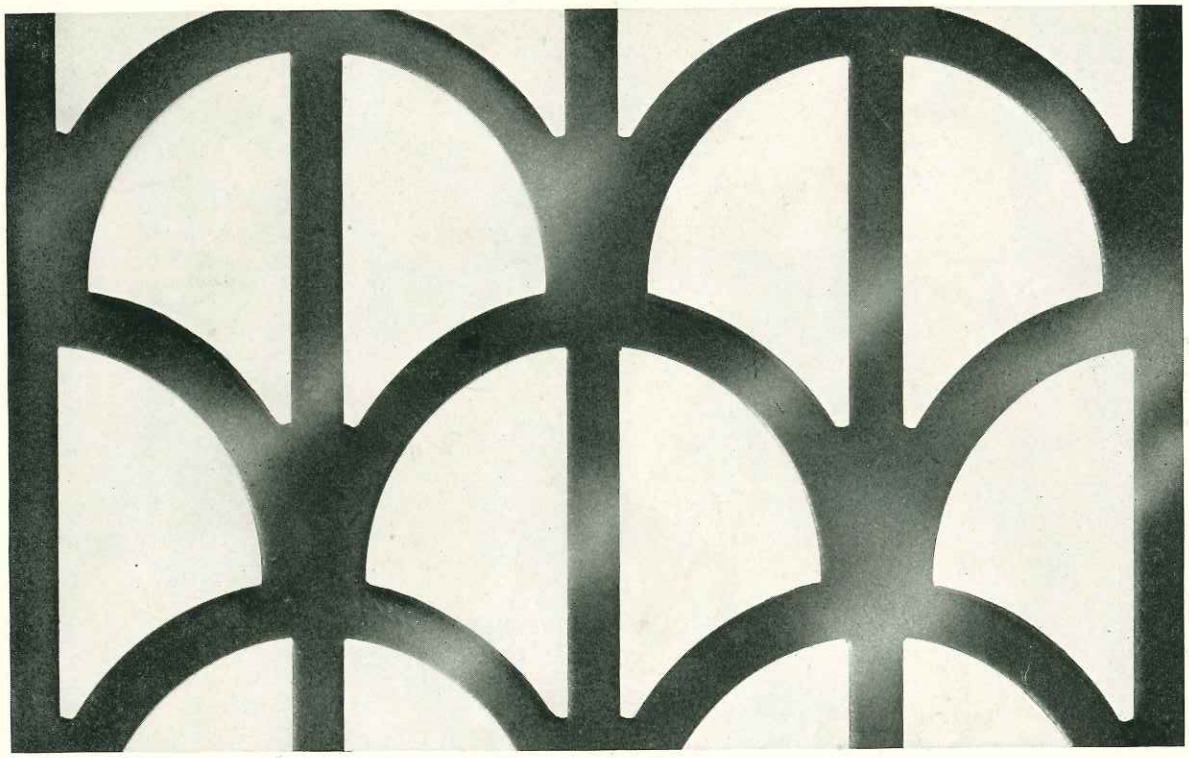
Table of Opening Sizes

No. of Units	Opening W	Opening H	No of Units	Opening W	Opening H
1	1½"	1⅝"	53	58⅜"	50⅜"
3	3 1/16"	3½"	55	60 9/16"	52¼"
5	5⅞"	5⅜"	57	62¾"	54⅛"
7	8 1/16"	7¼"	59	64 5/16"	56"
9	10¼"	9⅛"	61	67⅛"	57⅞"
11	12 7/16"	11"	63	69 5/16"	59¾"
13	14⅝"	12⅞"	65	71½"	61⅝"
15	16 13/16"	14¾"	67	73 1/16"	63½"
17	19"	16⅝"	69	75⅞"	65⅜"
19	21 3/16"	18½"	71	78 1/16"	67¼"
21	23⅜"	20⅜"	73	80¼"	69⅛"
23	25 9/16"	22¼"	75	82 7/16"	71"
25	27¾"	24⅛"	79	84⅝"	72⅞"
27	29 5/16"	26"	81	86 13/16"	74¾"
29	32⅛"	27⅞"	83	89"	76⅝"
31	34 5/16"	29¾"	85	91 3/16"	78½"
33	36½"	31⅝"	87	93⅜"	80⅜"
35	38 1/16"	33½"	89	95 9/16"	82¼"
37	40⅞"	35⅜"	91	97¾"	84⅛"
39	43 1/16"	37¼"	93	99 5/16"	86"
41	45¼"	39⅛"	95	102⅛"	87⅞"
43	47 7/16"	41"	97	104 5/16"	89¾"
45	49⅝"	42⅞"	99	106½"	91⅝"
47	51 13/16"	44¾"	101	108 1/16"	93½"
49	54"	46⅝"	103	110⅞"	95⅜"
51	56 3/16"	48½"			

For additional openings add 2 3/16" to Height and 1⅞ to Width.



GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

DESIGN J DIVIDED FISH SCALE

65% FREE AREA

2⅝" W. x 1-13/16" H. UNIT 5/16" FRETWORK

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

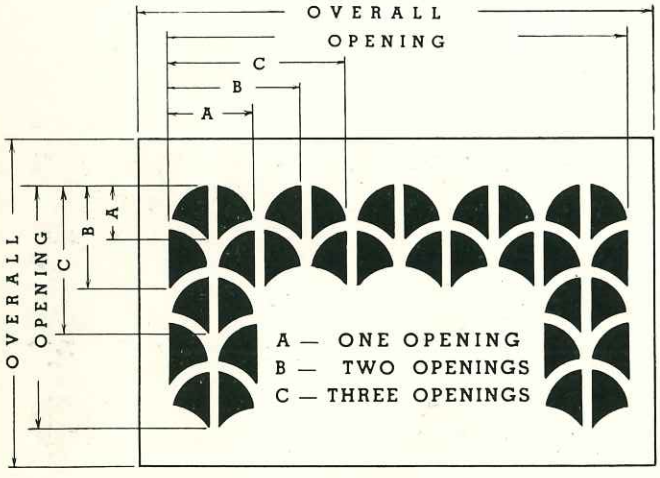
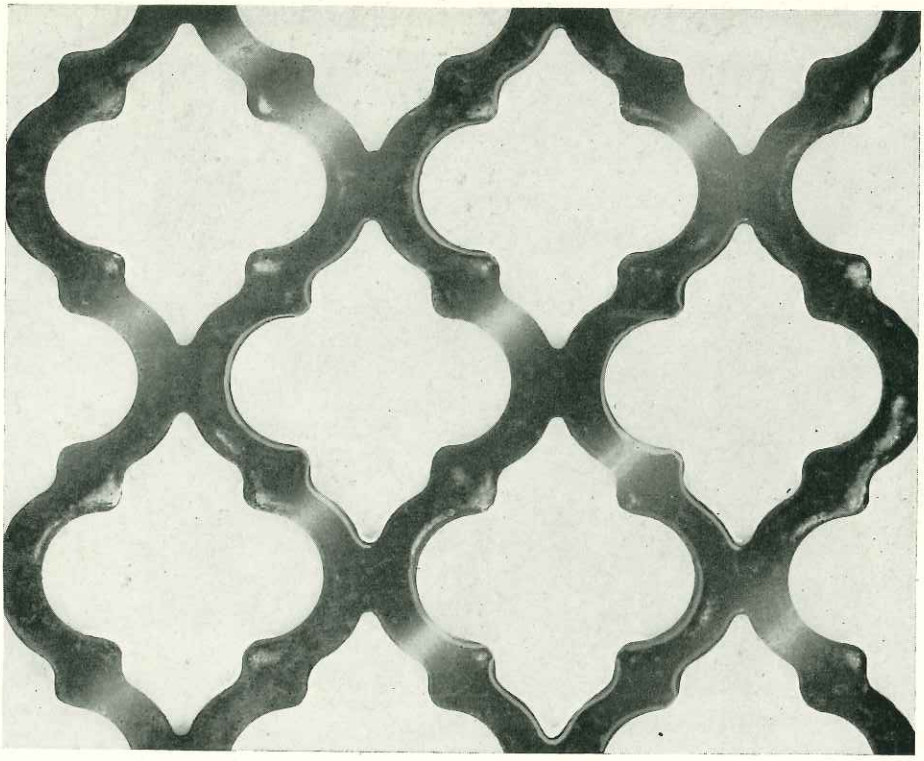


Table of Opening Sizes

No. of Units	Opening W	Opening H	No. of Units	Opening W	Opening H
1	2 9/16"	1 7/8"	27	39 15/16"	39 1/4"
2	4"	3 5/16"	28	41 3/8"	40 11/16"
3	5 7/16"	4 3/4"	29	42 13/16"	42 1/8"
4	6 7/8"	6 3/16"	30	44 1/4"	43 9/16"
5	8 5/16"	7 5/8"	31	45 11/16"	45"
6	9 3/4"	9 1/16"	32	47 1/8"	46 7/16"
7	11 3/16"	10 1/2"	33	48 9/16"	47 7/8"
8	12 5/8"	11 15/16"	34	50"	49 5/16"
9	14 1/16"	13 3/8"	35	51 7/16"	50 3/4"
10	15 1/2"	14 13/16"	36	52 7/8"	52 3/16"
11	16 15/16"	16 1/4"	37	54 5/16"	53 5/8"
12	18" 3/8	17 11/16"	38	55 3/4"	55 1/16"
13	19 13/16"	19 1/8"	39	57 3/16"	56 1/2"
14	21 1/4"	20 9/16"	40	58 5/8"	57 15/16"
15	22 11/16"	22"	41	60 1/16"	59 3/8"
16	24 1/8"	23 7/16"	42	61 1/2"	60 13/16"
17	25 9/16"	24 7/8"	43	62 15/16"	62 1/4"
18	27"	26 5/16"	44	64 3/8"	63 11/16"
19	28 7/16"	27 3/4"	45	65 13/16"	65 1/8"
20	29 7/8"	29 3/16"	46	67 1/4"	66 9/16"
21	31 5/16"	30 5/8"	47	68 11/16"	68"
22	32 3/4"	32 1/16"	48	70 1/8"	69 7/16"
23	34 3/16"	33 1/2"	49	71 9/16"	70 7/8"
24	35 5/8"	34 15/16"	50	73"	72 5/16"
25	37 1/16"	36 3/8"	51	74 7/16"	73 3/4"
26	38 1/2"	37 13/16"	52	75 7/8"	75 3/16"

For additional openings add 1 7/16" to Height or Width.

GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

STYLE "L" GOTHIC

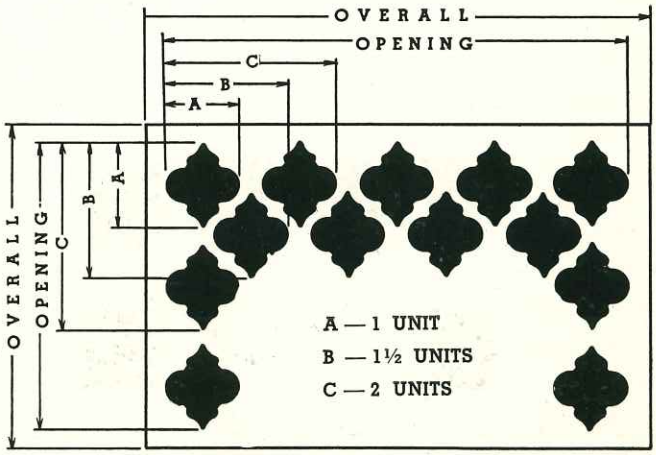
Table of Opening Sizes

No. of Units	Opening W	Opening H	No. of Units	Opening W	Opening H
1	2″	2 1/8″	26	52″	55 1/4″
2	4″	4 1/4″	27	54″	57 3/8″
3	6″	6 3/8″	28	56″	59 1/2″
4	8″	8 1/2″	29	58″	61 5/8″
5	10″	10 5/8″	30	60″	63 3/4″
6	12″	12 3/4″	31	62″	65 7/8″
7	14″	14 7/8″	32	64″	68″
8	16″	17″	33	66″	70 1/8″
9	18″	19 1/8″	34	68″	72 1/4″
10	20″	21 1/4″	35	70″	74 3/8″
11	22″	23 3/8″	36	72″	76 1/2″
12	24″	25 1/2″	37	74″	78 5/8″
13	26″	27 5/8″	38	76″	80 3/4″
14	28″	29 3/4″	39	78″	82 7/8″
15	30″	31 7/8″	40	80″	85″
16	32″	34″	41	82″	87 1/8″
17	34″	36 1/8″	42	84″	89 1/4″
18	36″	38 1/4″	43	86″	91 3/8″
19	38″	40 3/8″	44	88″	93 1/2″
20	40″	42 1/2″	45	90″	95 5/8″
21	42″	44 5/8″	46	92″	97 3/4″
22	44″	46 3/4″	47	94″	99 7/8″
23	46″	48 7/8″	48	96″	102″
24	48″	51″	49	98″	104 1/8″
25	50″	53 1/8″	50	100″	106 1/4″

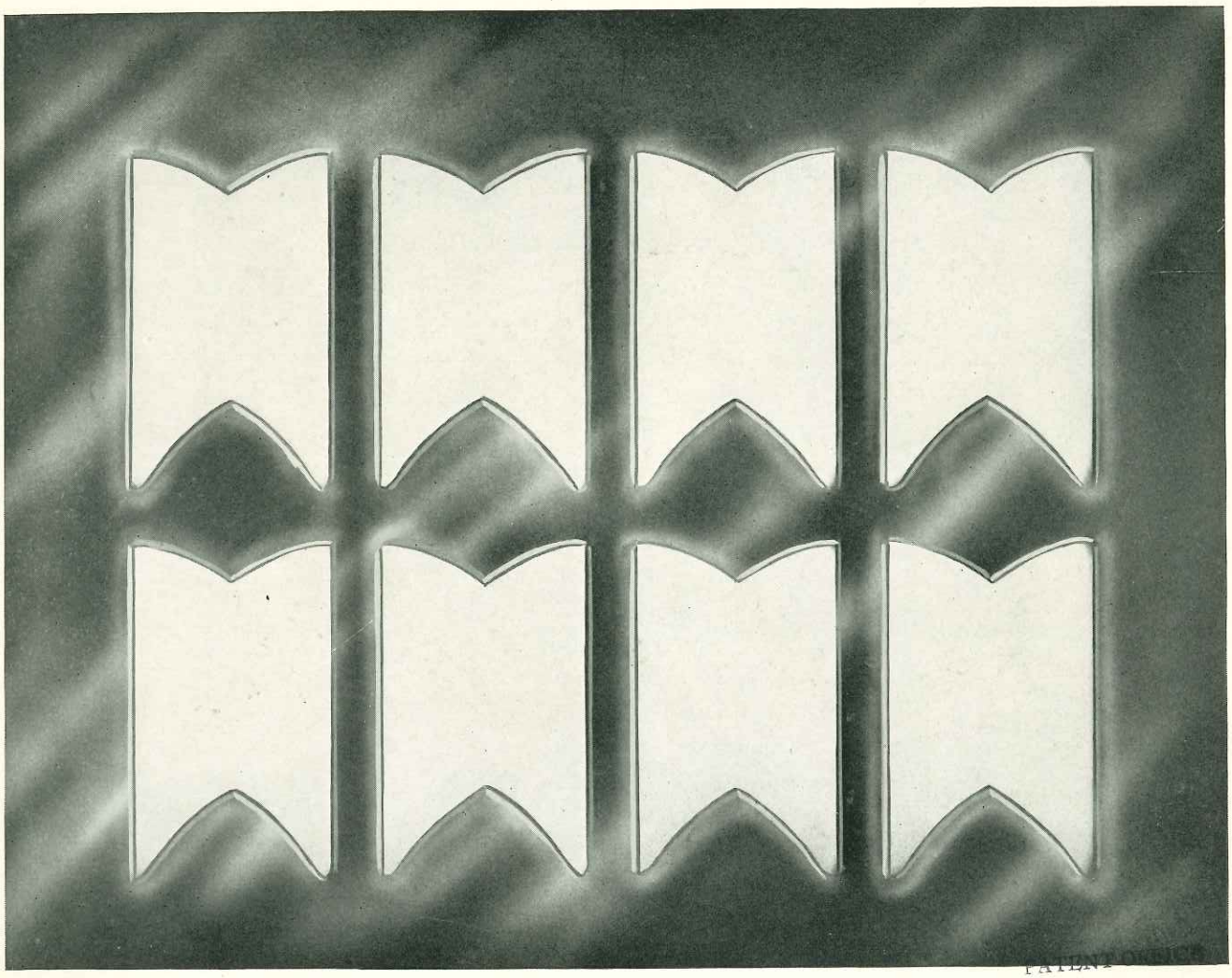
For additional openings add 2″ to width, 2 1/8″ to height.

65% FREE AREA

2″ W. x 2 1/8″ H. UNIT



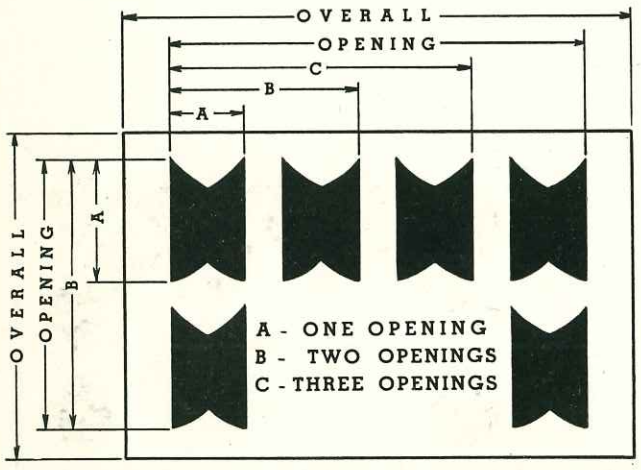
GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

DESIGN "A"

NOV 17 1948
DESIGN DIVISION



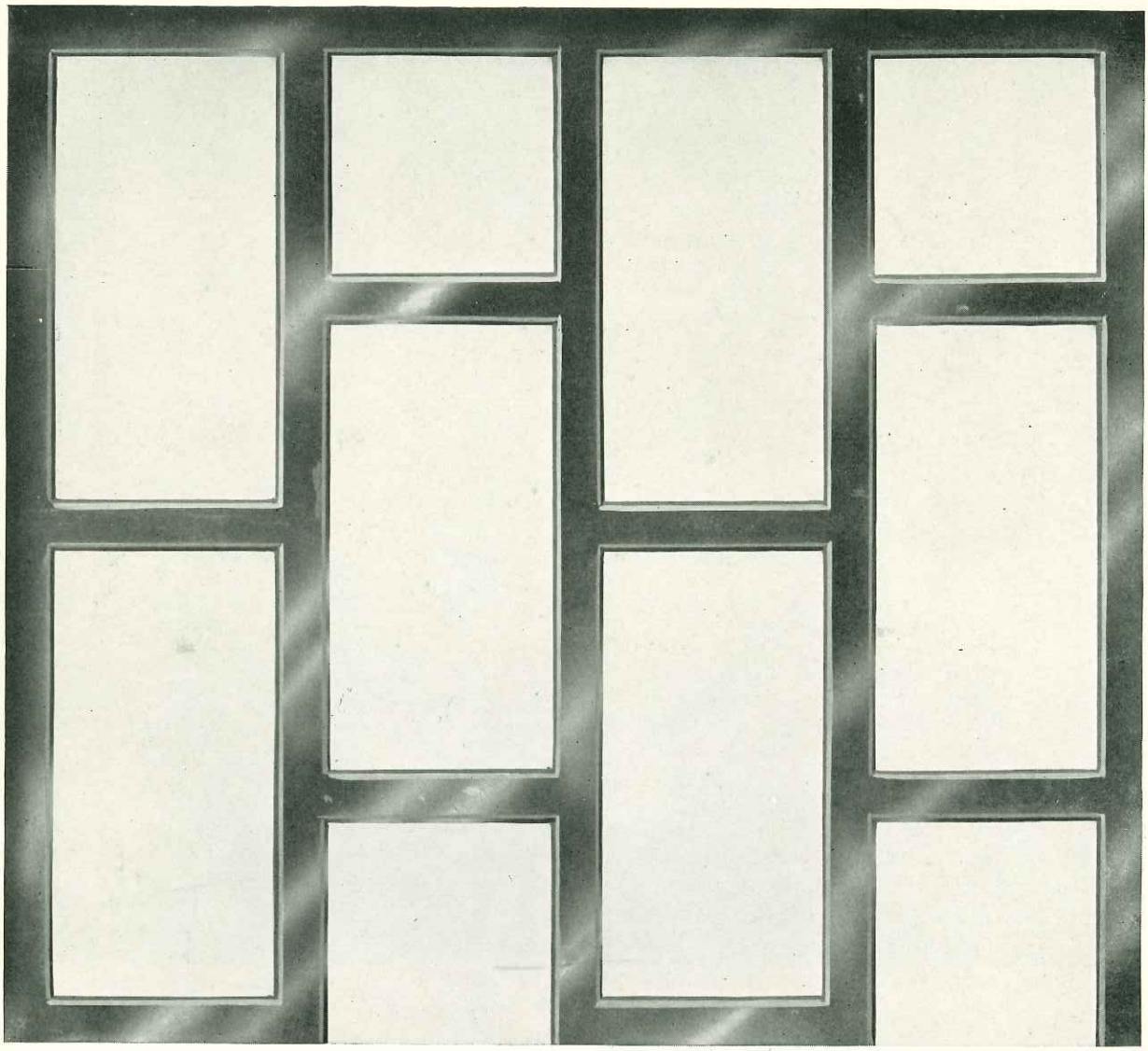
UNIT 1-13/16" HIGH

WIDTH MAY BE VARIED FROM 1" TO 1⅜"

⅜" BAR

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

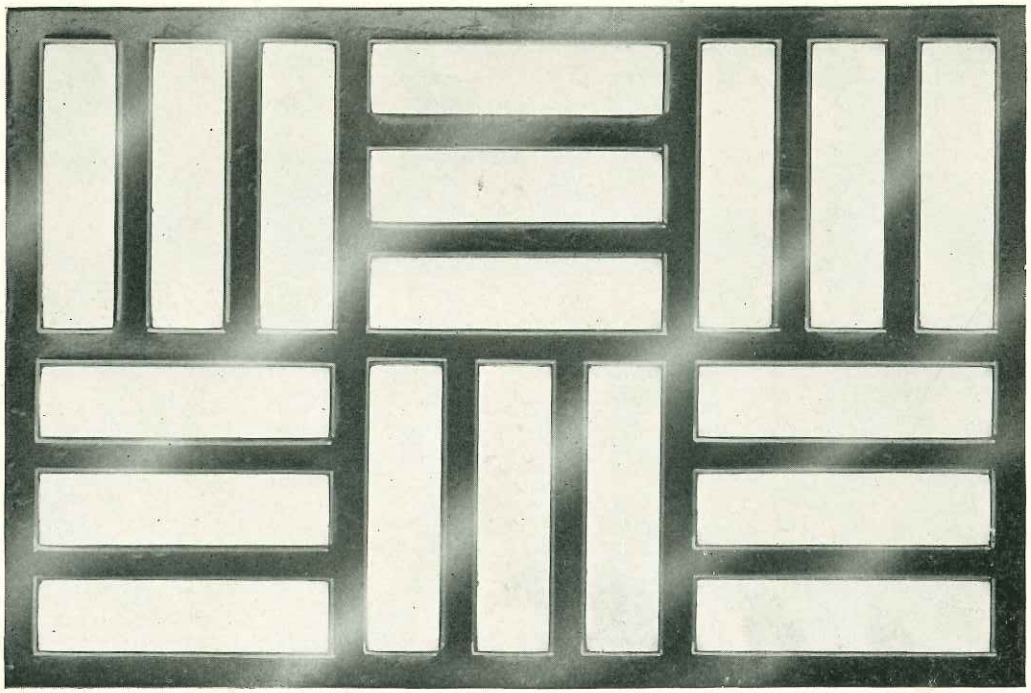
DESIGN H1

LARGE OPENING—1¼" x 2½"
SMALL OPENING—1¼" x 1¼"
¼" BAR
65% FREE AREA

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

Design H 1 is a special adaptation of the sanitary design. It is especially good for use in hospitals, schoolrooms, or any place where quick and easy cleaning is desirable.

GRILLES STAMPED ORNAMENTAL DESIGN



PATENT OFFICE NOV 17 1948 DESIGN DIVISION

ACTUAL SIZE

DESIGN "N"

1½" x 1½" UNIT 3/16" BAR

60% FREE AREA

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

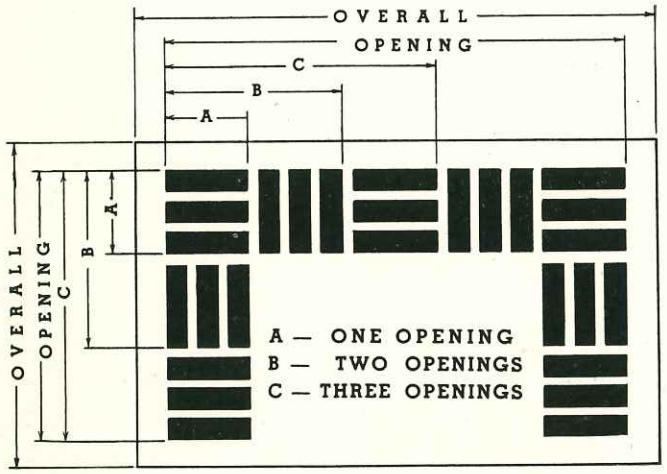
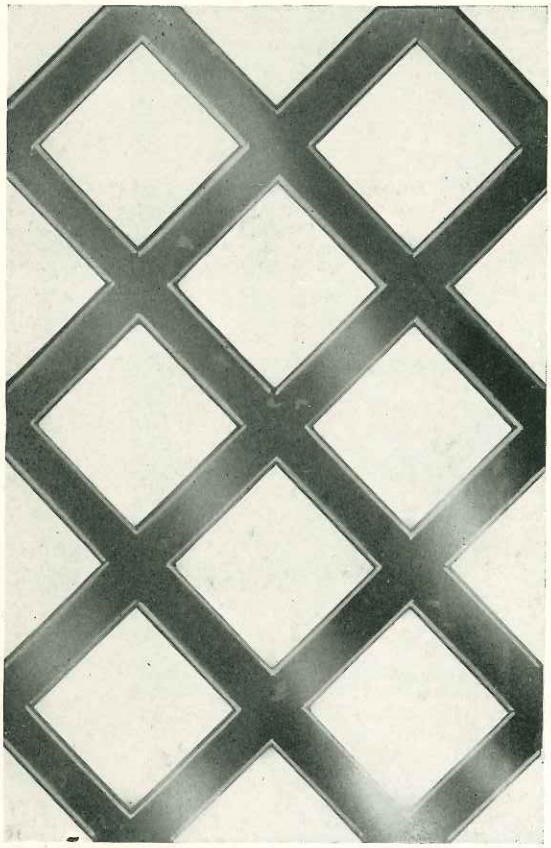


Table of Opening Sizes

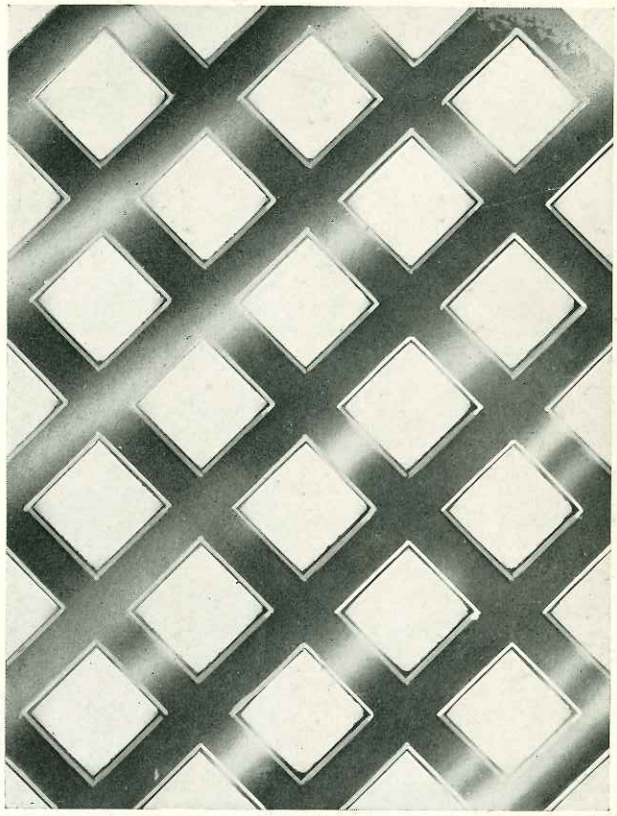
No. of Units	Opening	No. of Units	Opening
1	1½"	24	40 5/16"
2	3 3/16"	25	42"
3	4 7/8"	26	43 11/16"
4	6 9/16"	27	45 3/8"
5	8¼"	28	47 1/16"
6	9 15/16"	29	48¾"
7	11⅝"	30	50 7/16"
8	13 5/16"	31	52⅛"
9	15"	32	53 13/16"
10	16 11/16"	33	55½"
11	18⅜"	34	57 3/16"
12	20 1/16"	35	58⅞"
13	21¾"	36	60 9/16"
14	23 7/16"	37	62¼"
15	25⅛"	38	63 15/16"
16	26 13/16"	39	65⅝"
17	28½"	40	67 5/16"
18	30 3/16"	41	69"
19	31⅞"	42	70 11/16"
20	33 9/16"	43	72⅜"
21	35¼"	44	74 1/16"
22	36 15/16"	45	75¾"
23	38⅝"		

For additional openings add 1 11/16" for each opening.

GRILLES STAMPED DIAGONAL MESH



DESIGN "G"
ACTUAL SIZE



DESIGN "F"
ACTUAL SIZE

Table of Opening Sizes

No. of Units	Opening	No. of Units	Opening
1	1 1/16"	53	38 7/16"
3	2 1/2"	55	39 7/8"
5	3 15/16"	57	41 5/16"
7	5 3/8"	59	42 3/4"
9	6 13/16"	61	44 3/16"
11	8 1/4"	63	45 5/8"
13	9 11/16"	65	47 1/16"
15	11 1/8"	67	48 1/2"
17	12 9/16"	69	49 15/16"
19	14"	71	51 3/8"
21	15 7/16"	73	52 13/16"
23	16 7/8"	75	54 1/4"
25	18 5/16"	77	55 11/16"
27	19 3/4"	79	57 1/8"
29	21 3/16"	81	58 9/16"
31	22 5/8"	83	60"
33	24 1/16"	85	61 7/16"
35	25 1/2"	87	62 7/8"
37	26 15/16"	89	64 5/16"
39	28 3/8"	91	65 3/4"
41	29 13/16"	93	67 3/16"
43	31 1/4"	95	68 5/8"
45	32 11/16"	97	70 1/16"
47	34 1/8"	99	71 1/2"
49	35 9/16"	101	72 15/16"
51	37"	103	74 3/8"

For additional openings add 1 7/16" for each opening.

DESIGN "G" 3/4" DIAGONAL
1/4" Bar 55% Free Area

DESIGN "F" 1/2" DIAGONAL
1/4" Bar 45% Free Area

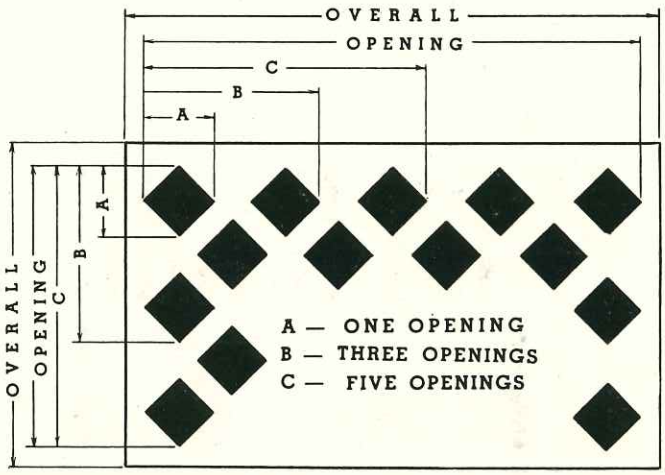
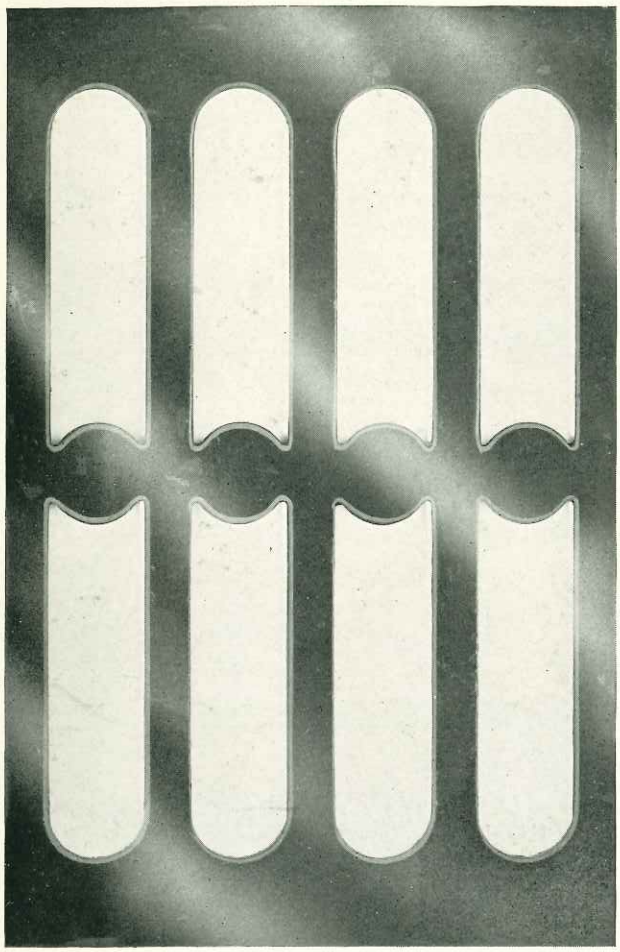


Table of Opening Sizes

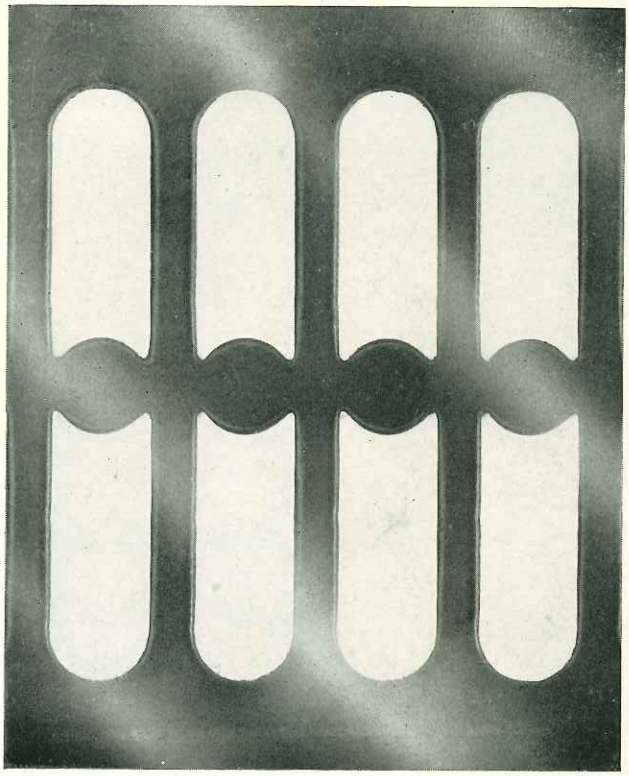
No. of Units	Opening	No. of Units	Opening
1	21/32"	55	29 11/32"
3	1 23/32"	57	30 13/32"
5	2 25/32"	59	31 15/32"
7	3 27/32"	61	32 17/32"
9	4 29/32"	63	33 19/32"
11	5 31/32"	65	34 21/32"
13	7 1/32"	67	25 23/32"
15	8 3/32"	69	36 25/32"
17	9 5/32"	71	37 27/32"
19	10 7/32"	73	38 29/32"
21	11 9/32"	75	39 31/32"
23	12 11/32"	77	41 1/32"
25	13 13/32"	79	42 3/32"
27	14 15/32"	81	43 5/32"
29	15 17/32"	83	44 7/32"
31	16 19/32"	85	45 9/32"
33	17 21/32"	87	46 11/32"
35	18 23/32"	89	47 13/32"
37	19 25/32"	91	48 15/32"
39	20 27/32"	93	49 17/32"
41	21 29/32"	95	50 19/32"
43	22 31/32"	97	51 21/32"
45	24 1/32"	99	52 23/32"
47	25 3/32"	101	53 25/32"
49	26 5/32"	103	54 27/32"
51	27 7/32"	105	55 29/32"
53	28 9/32"		

For additional openings add 1 1/16" for each opening.

GRILLES STAMPED SLOT DESIGNS



DESIGN "OO"
ACTUAL SIZE



DESIGN "O"
ACTUAL SIZE

DESIGN "OO" VERTICAL SLOT
½" x 4" Unit ¼" Bar 58% Free Area

Table of Opening Sizes

No. of Units	Opening W	Opening H	No. of Units	Opening W	Opening H
1	½"	4"	22	16¼"	93¼"
2	1¼"	8¼"	23	17"	
3	2"	12½"	24	17¾"	
4	2¾"	16¾"	25	18½"	
5	3½"	21"	26	19¼"	
6	4¼"	25¼"	27	20"	
7	5"	29½"	28	20¾"	
8	5¾"	33¾"	29	21½"	
9	6½"	38"	30	22¼"	
10	7¼"	42¼"	31	23"	
11	8"	46½"	32	23¾"	
12	8¾"	50¾"	33	24½"	
13	9½"	55"	34	25¼"	
14	10¼"	59¼"	35	26"	
15	11"	63½"	36	26¾"	
16	11¾"	67¾"	37	27½"	
17	12½"	72"	38	28¼"	
18	13¼"	76¼"	39	29"	
19	14"	80½"	40	29¾"	
20	14¾"	84¾"	41	30½"	
21	15½"	89"	42	31¼"	

For additional openings add ¾" to width, 4¼" to height.

DESIGN "O" VERTICAL SLOT
½" x 3" Unit ¼" Bar 52% Free Area

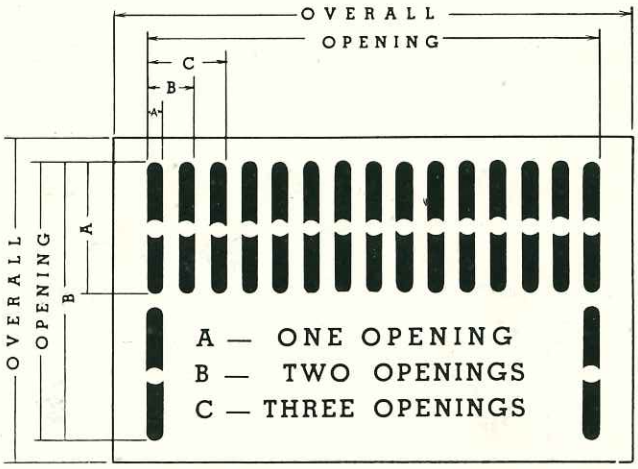
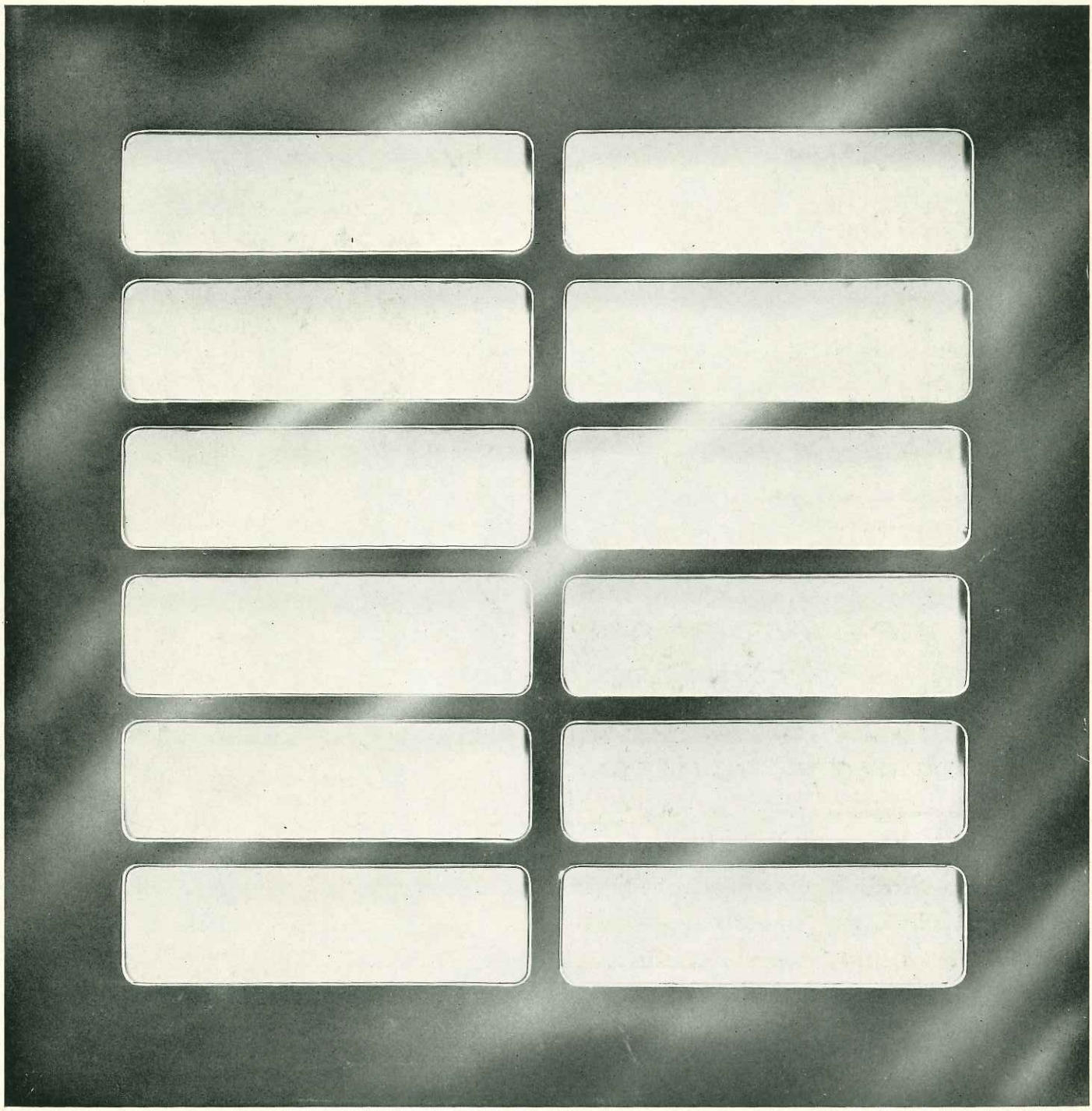


Table of Opening Sizes

No. of Units	Opening W	Opening H	No. of Units	Opening W	Opening H
1	½"	3"	22	16¼"	71¾"
2	1¼"	6¼"	23	17"	75"
3	2"	9½"	24	17¾"	78¼"
4	2¾"	12¾"	25	18½"	81½"
5	3½"	16"	26	19¼"	84¾"
6	4¼"	19¼"	27	20"	88"
7	5"	22½"	28	20¾"	91¼"
8	5¾"	25¾"	29	21½"	94½"
9	6½"	29"	30	22¼"	
10	7¼"	32¼"	31	23"	
11	8"	35½"	32	23¾"	
12	8¾"	38¾"	33	24½"	
13	9½"	42"	34	25¼"	
14	10¼"	45¼"	35	26"	
15	11"	48½"	36	26¾"	
16	11¾"	51¾"	37	27½"	
17	12¼"	55"	38	28¼"	
18	13¼"	58¼"	39	29"	
19	14"	61½"	40	29¾"	
20	14¾"	64¾"	41	30½"	
21	15½"	68"	42	31¼"	

For additional openings add ¾" to width, 3¼" to height.

GRILLES STAMPED SLOT DESIGNS



ACTUAL SIZE

DESIGN H SANITARY DESIGN

13/16" x 2-13/16" MESH 3/16" BAR 77% FREE AREA

For use in hospitals, schoolrooms or any place where quick and easy cleaning is desirable.

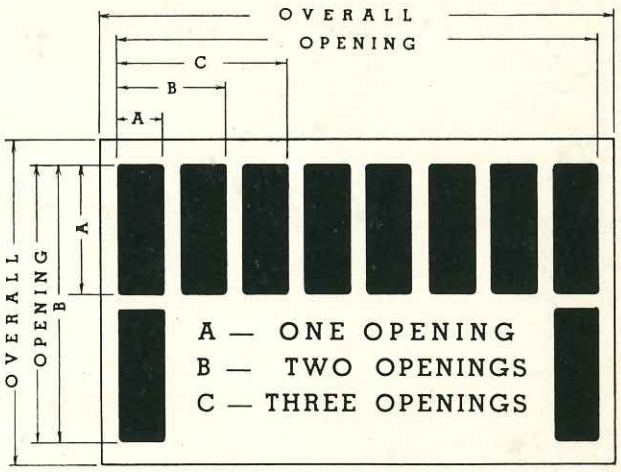
See table next page.

GRILLES STAMPED SLOT DESIGNS

No. of Units	Opening W	Opening H	No. of Units	Opening W	Opening H
1	1 3/16"	2 3/16"	27	26 3/16"	80 3/16"
2	1 1/2"	5 3/16"	28	27 3/16"	83 3/16"
3	2 3/16"	8 3/16"	29	28 3/16"	86 3/16"
4	3 3/16"	11 3/16"	30	29 3/16"	89 3/16"
5	4 3/16"	14 3/16"	31	30 3/16"	92 3/16"
6	5 3/16"	17 3/16"	32	31 3/16"	95 3/16"
7	6 3/16"	20 3/16"	33	32 3/16"	
8	7 3/16"	23 3/16"	34	33 3/16"	
9	8 3/16"	26 3/16"	35	34 3/16"	
10	9 3/16"	29 3/16"	36	35 3/16"	
11	10 3/16"	32 3/16"	37	36 3/16"	
12	11 3/16"	35 3/16"	38	37 3/16"	
13	12 3/16"	38 3/16"	39	38 3/16"	
14	13 3/16"	41 3/16"	40	39 3/16"	
15	14 3/16"	44 3/16"	41	40 3/16"	
16	15 3/16"	47 3/16"	42	41 3/16"	
17	16 3/16"	50 3/16"	43	42 3/16"	
18	17 3/16"	53 3/16"	44	43 3/16"	
19	18 3/16"	56 3/16"	45	44 3/16"	
20	19 3/16"	59 3/16"	46	45 3/16"	
21	20 3/16"	62 3/16"	47	46 3/16"	
22	21 3/16"	65 3/16"	48	47 3/16"	
23	22 3/16"	68 3/16"	49	48 3/16"	
24	23 3/16"	71 3/16"	50	49 3/16"	
25	24 3/16"	74 3/16"	51	50 3/16"	
26	25 3/16"	77 3/16"	52	51 3/16"	

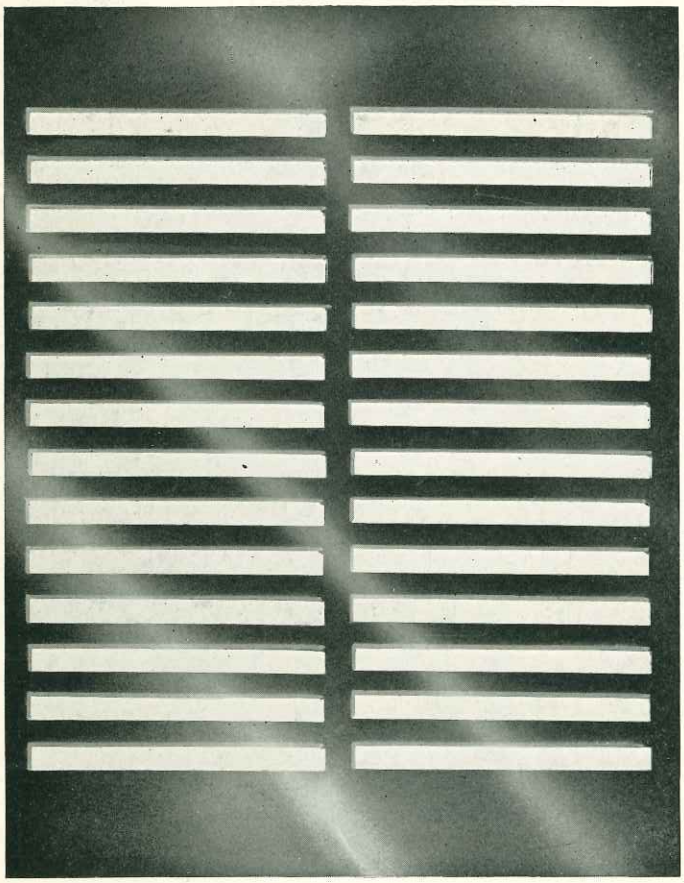
For additional openings add 1" to Width, 3" to Height.

SANITARY DESIGN (Continued)



PATENT OFFICE
NOV 17 1948
DESIGN DIVISION

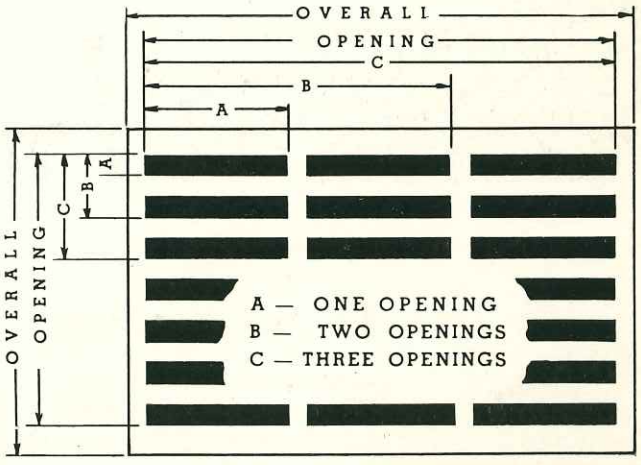
DESIGN "V"



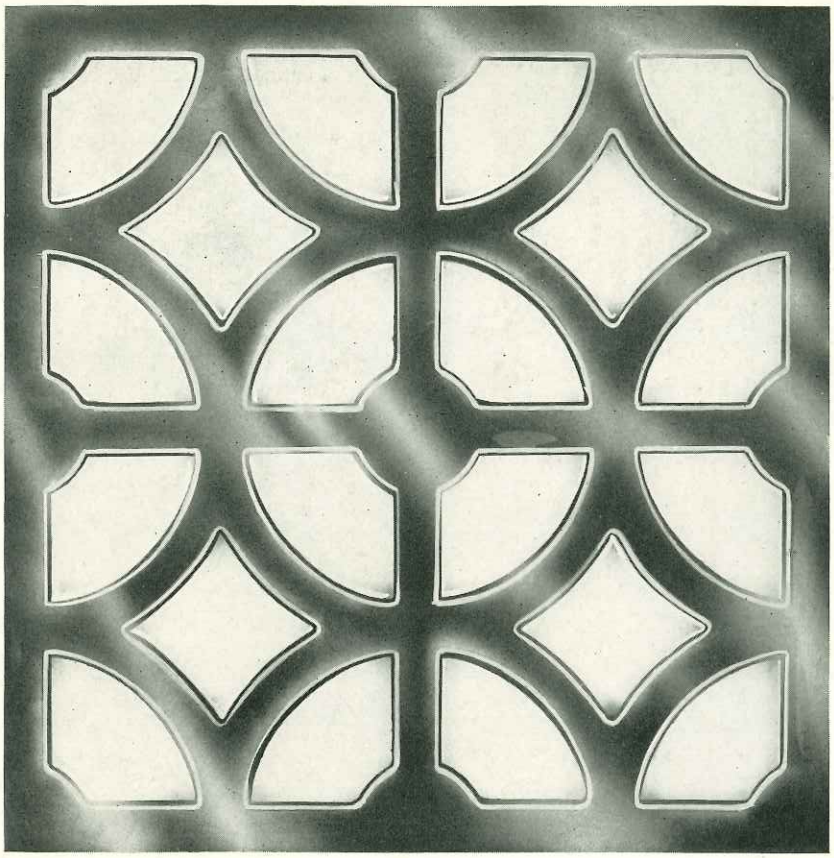
1½" x 3/16" UNIT

3/16" BAR

45% FREE AREA



GRILLES STAMPED ORNAMENTAL DESIGN



ACTUAL SIZE

DESIGN "W" WHEEL DESIGN

50% FREE AREA
1⅞" x 1⅞" UNIT ¼" BAR

Can be furnished in steel from 16 gauge to ¼ inch thick. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

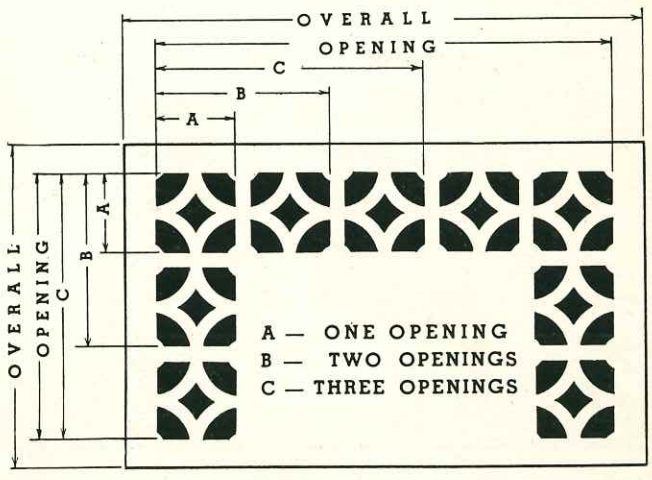
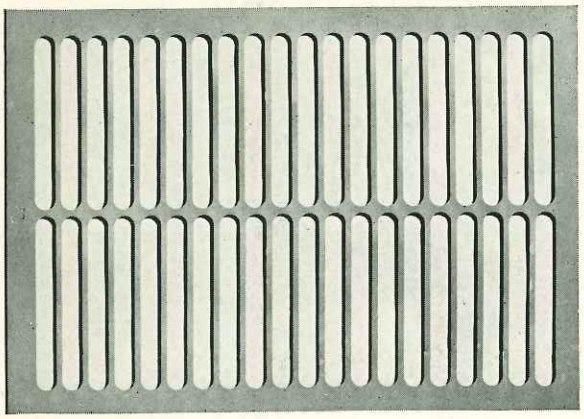


Table of Opening Sizes

No. of Units	Opening	No. of Units	Opening
1	1⅞"	27	57⅛"
2	4"	28	59¼"
3	6⅛"	29	61⅜"
4	8¼"	30	63½"
5	10⅜"	31	65⅝"
6	12½"	32	67¾"
7	14⅝"	33	69⅞"
8	16¾"	34	72"
9	18⅞"	35	74⅛"
10	21"	36	76¼"
11	23⅛"	37	78⅜"
12	25¼"	38	80½"
13	27⅜"	39	82⅝"
14	29½"	40	84¾"
15	31⅝"	41	86⅞"
16	33¾"	42	89"
17	35⅞"	43	91⅛"
18	38"	44	93¼"
19	40⅛"	45	95⅜"
20	42¼"	46	97½"
21	44⅜"	47	99⅝"
22	46½"	48	101¾"
23	48⅝"	49	103⅞"
24	50¾"	50	106"
25	52⅞"	51	108⅛"
26	55"	52	110¼"

For additional openings add 2⅛" for each opening.

GRILLES STAMPED ORNAMENTAL DESIGN



DESIGN "S"

SANITARY BAR TYPE DESIGN

for use in hospitals and similar public buildings where easy cleaning is desirable.

Very appropriate for radiator enclosures or concealed radiation.

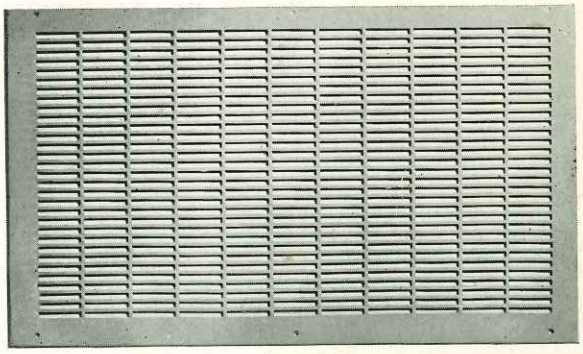
Height of slot is variable from 5¾" to 9¾". Width of slot is ¾" with ¼" bar. Can be furnished in heights greater than 9¾" but not recommended.

Complete information furnished on request. Can be furnished in steel from 16 gauge to ¼" thick; and furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.

This design very adaptable for use in school rooms under windows for ventilation, chalk trays, and many other uses.

MESH: 1½" wide x 13/64" high
⅛" Fretwork

Can be furnished in steel from 16 gauge to 10 gauge in thickness. Furnished in non-ferrous metals, (such as aluminum, brass, bronze, and stainless steel) in various thicknesses according to the physical properties of these metals.



DESIGN "B" 59% Open Area

TABLE OF OPENING SIZES FOR DESIGN "B"

No. of Units	Opening Width	Opening Height	No. of Units	Opening Width	Opening Height	No. of Units	Opening Width	Opening Height	No. of Units	Opening Width	Opening Height
1	1½	13/64	16	25⅞	5⅛	31	50¼	10 3/64	46	74⅝	14 31/32
2	3⅛	17/32	17	27½	5 29/64	32	51⅞	10⅜	47	74¼	15 19/64
3	4¾	55/64	18	29⅛	5 25/32	33	53½	10 45/64	48	77⅞	15⅝
4	6⅜	1 3/16	19	30¾	6 7/64	34	55⅛	11 1/32	49	79½	15 61/64
5	8	1 33/64	20	32⅜	6 7/16	35	56¾	11 23/64	50	81⅛	16 9/32
6	9⅝	1 27/32	21	34	6 49/64	36	58⅜	11 11/16	51	82¾	16 39/64
7	11¼	2 11/64	22	35⅝	7 3/32	37	60	12 1/64	52	84⅜	16 15/16
8	12⅞	2½	23	37¼	7 27/64	38	61⅝	12 11/32	53	86	17 17/64
9	14½	2 53/64	24	38⅞	7¾	39	63¼	12 43/64	54	87⅝	17 19/32
10	16⅛	3 5/32	25	40½	8 5/64	40	64⅞	13	55	89¼	17 59/64
11	17¾	3 31/64	26	42⅛	8 13/32	41	66½	13 21/64	56	90⅞	18¼
12	19⅜	3 13/16	27	43¾	8 47/64	42	68⅛	13 21/32	57	92½	18 3/64
13	21	4 9/64	28	45⅜	9 1/16	43	69¾	13 63/64	58	94⅛	18 1/16
14	22⅝	4 15/32	29	47	9 25/64	44	71⅜	14 5/16	59	95¾	19 5/64
15	24¼	4 51/64	30	48⅝	9 23/32	45	73	14 41/64	60	97⅜	19 9/16

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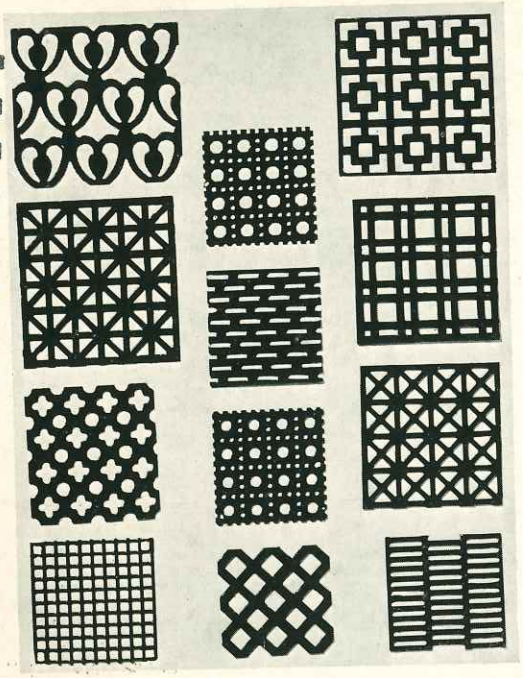
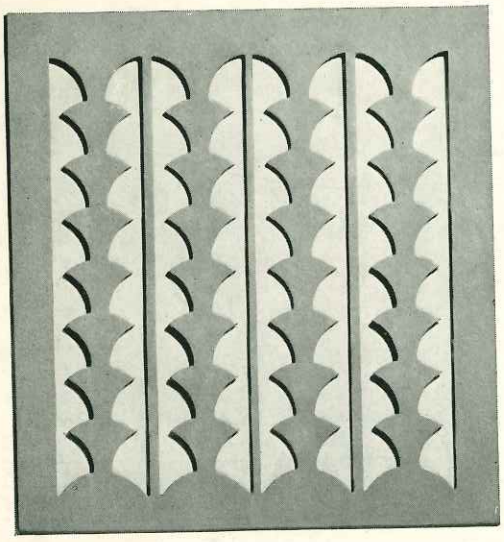
PERFORATED METAL



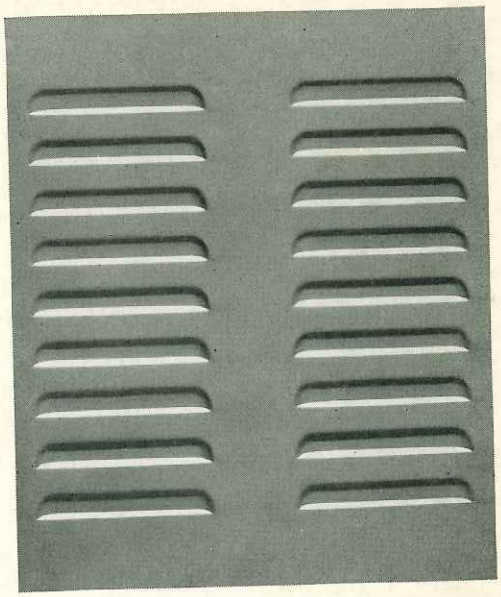
Let us send you our sample-board with the above designs.



DESIGN BJ

Newly designed stamped radiator grille—
Large open area.
Complete information furnished upon request.
Can be furnished in steel from 16 gauge to ¼" thick, also aluminum, brass, and bronze.

DOOR LOUVRES



Fixed steel door louvres made in 3 sizes or any combination

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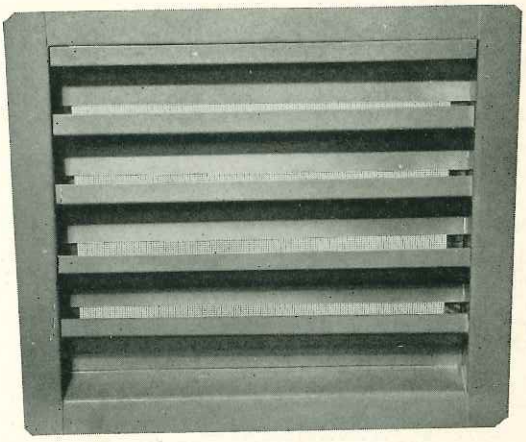
Design A-A Louvres 3½"
Design B-B Louvres 7"
Design C-C Louvres 9"

Complete information upon request.



DESIGN SL

Stationary steel louvres designed to ventilate and so constructed to exclude the rain or snow. Insect screen furnished on back.

Prices on application.

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